



David Dickson talks to the distinguished anthropologist in the first of a series of profiles of French intellectuals. 7

The New Left
David Cauter reviews a new book on the decline of the New Left; Colin Crouch on the differences between social democracy in Sweden and Britain. 11

Teaching the teachers
Staff development in universities, polytechnics and medical schools compared. 6

Policy studies
Is the failure to establish a British Brookings an example of the "British disease"? It was meant to cure? Lender, 10

Graduate jobs
Bill Kirkman discusses the background to this week's figures on graduate employment. 9

King Abdul Aziz
A 16-page report on one of Saudi Arabia's new universities. I—XVI

North American/overseas news 4
Don's diary 5
Research 5
Noticeboard 8
Letters 10
Books 11-14
Classified index 15

Universities 'will resist expansion without cash'

by Frances Gibb
Universities will not agree to take on larger loads of higher education in 1980/81 without an increase in their provisional grant for that year, according to informed university sources this week.
It is now thought likely that, in line with recommendations by the Council of Local Education Authorities, the Department of Education and Science will allow to universities at least 305,000 of the 560,000 higher education places in 1980/81.
But it is understood that the University Grants Committee, in the newly discussing the division of numbers with the DES, will resist further expansion without more money.
Earlier this year the JGC told universities that their provisional grant for 1980/81 was £565m, at 1977/78 prices, assuming the same level of fees as this year. This was an increase in three years of less than 2 per cent.
At the same time university numbers were expected to grow by 5 per cent, the JGC said. The greatest number for which the committee's present judgement, the provisional grant for 1981/81 can be regarded as adequate was about 291,000. But there remain open the

possibilities, on the one hand, that the final grants might be revised to aim for a higher number, and on the other, that an even more modest objective might be set.
It is unlikely, therefore, that the UGC will agree to an increase to 305,000-310,000 without a revision of the provisional 1980/81 grant.
The uneven split of the 560,000 students between university and polytechnic sectors is out of line with the original proposals in the White Paper, A Framework for Expansion. That recommended numbers be divided equally between the two sectors.
The reasoning behind it is thought to be that universities, unlike polytechnics, can take more students without extra buildings. But while CLEA has recommended an uneven division to the DES, some local authorities, notably Sheffield, believe there should be comparable growth between the sectors.
Mr S. B. Hanson, a senior assistant education officer at Sheffield, said comparable growth would give each sector 280,000, bringing polytechnics up to 265,000 and universities to 295,000.
The DES is expected to decide on the distribution of higher education numbers in the next month.

BR arrange AUT pay demo specials

British Rail are to run six special trains in cope with an expected massive turnout of university lecturers in a rally in London on November 16.
The rally, which will include a lobby of Parliament, is in support of the lecturer's pay claim now before the Government. At least 15,000 lecturers are expected to attend.
British Rail have agreed to run extra trains, from Manchester, Liverpool, Newcastle, Wales, Sheffield and Birmingham and to offer cheap fares.
The Association of University Teachers, which is organizing the rally, has written to all vice-chancellors asking them to attend personally. They have also asked them to recognize that many staff will wish to rearrange their commitments in order to attend.
The 1977/78 wages have been asked to be put forward mutatis mutandem and governing bodies calling on them to support the pay claim of between 12 and 16 per cent.
An alternative pay claim giving lecturers a starting salary £150 in excess of the official Association of University Teachers claim was launched this week.
The Association of Scientific, Technical and Managerial Staffs, representing 2,000 university teachers, has written in the Government saying lecturers should start on £1,366 a year rising to £2,718. Professors' salaries should average £12,500.
Under the AUT's two-part claim, announced last week, lecturers would start on about £2,500 with a first-class average of over £1,000. Its claim is set out before the University Authorities Panel.
The ASTMS proposals, unlike those of the AUT, represent an increase in the ratio separating the two parts of the claim. Under the AUT's scheme the professional rates would increase by nearly 40 per cent against a 27 per cent increase at the bottom of the lecturer grade.
The ASTMS supports the principle of dividing the university teachers' pay claim into two halves, one in reality the "historical anomaly" in pay dating back to 1974, the other in cover cost of living increases during the current year.

Optimism greets pessimistic MRC annual report

by Clive Cookson
science correspondent
The optimistic atmosphere in which the Medical Research Council's annual report was published this week contrasted strongly with the gloom of the corresponding occasion at the Science Research Council last month.
The new bright atmosphere does not shine through the MRC annual report itself, which is almost as pessimistic on the financial and administrative side as the SRC document. It deals with disrupted financial planning, frustrated initiatives, bleak prospects, reduced long term grants, and so on, as a result of a two per cent cut in the council's budget for 1977/78.
But the report deals with the year up to March 1977. Since then the MRC has acquired a new secretary, Dr James Gowans, and apparently a much better financial outlook. At the publication press conference Dr Gowans carefully distanced himself from the contents of the annual report and gave his own more cheerful assessment of future prospects.
The council heard recently that its share of the Government Science Vote in the coming year will be 16 per cent up in real terms on 1977/78, he said. And the DES, which via £1m from its contribution to the MRC for commissioned research this year, is to give back £700,000 in 1978/79.
Therefore the MRC has restored the flow of funds for long-term



Engineering job-hunters may get new-look PhD

by Clive Cookson
science correspondent
A proposal to abandon the conventional research PhD as a major means of postgraduate training for engineers is being considered by the Science Research Council's Engineering Board.
An interim report of the board's education and training panel concludes that the traditional PhD is not appropriate training for work in most sections of the engineering industry. A survey by the panel showed little demand from employers for postgraduates trained in academic research.
The answer, the confidential report suggests, is to substitute new types of postgraduate training—Certificate of Postgraduate Studies and Operating Awards in Science and Engineering (CASE), Total Technology, teaching companies and other industry related schemes—for the conventional PhD. In 1976, 665 engineering students were awarded a PhD, compared to 121 CASE. This year the number of CASE awards is expected to reach 250.
The panel believes the SRC's training responsibilities should be discharged independently and not regarded as a means of implementing its research support function. It recognizes that it resources not to support academic research groups via the quota system or to have to be replaced from research funds or other sources. The example SRC research grants could have one or more research fellowships attached.
Last week's engineering board meeting had time only for a preliminary discussion of the report. Dr. E. J. H. Jones, the chairman, Professor John Denny of Imperial College, said the panel's recommendations will be considered thoroughly at the next meeting in December.
But the board did welcome one specific recommendation: that the SRC's CASE awards currently confined to three year PhD projects, be extended to shorter projects. The panel proposes a trial programme of 20 to 30 one-year CASE awards to be instituted next year.
The panel envisages that one or more appropriate, two-year CASE awards could become a prominent element in postgraduate training. It is considered that the greatest value of CASE schemes is to make the industry aware of the nature of the SRC and its problems.
Professor Brown thought there was "a fair chance" of the trial programme being approved.
Professor Geoffrey Allen, the SRC chairman, emphasized the tentative nature of the panel's plans. His final report on postgraduate training courses is to be placed next year for consideration by an engineering board and full council.
The SRC was not preparing to abandon traditional methods, he said; it was discussing where in the balance between them and the new schemes. If the panel were to provide postgraduate training without a research element the academic staff involved would still have to do research.
The panel suggests a new training policy for advanced engineering courses for many of which one month, ignored by industry and diminished by overseas students. Courses would be reviewed every five years and continued recognition would depend on strong industrial support and evidence that students were subsequently finding jobs in industry. The minimum number of British students would be five or, preferably, 10.
The report recognizes the proposals may mean a substantial reduction in the number of recognized courses.
Lender, page 10

Sir Nevill wins Nobel prize

Twenty years of pioneering work on the properties of disorder solids have been rewarded with a Nobel prize for Sir Nevill Mott, 72-year-old Emeritus Professor at Cambridge University.
He shares the physics prize with two leading American solid state physicists, Professor John Van Vleck of Harvard, who is 78, and Dr Philip Anderson, 54, of Bell Laboratories. Dr Anderson worked part-time at Cambridge's Cavendish Laboratory for eight years up to 1975.
Sir Nevill Mott, who succeeded Sir Brian Pippard, who succeeded Sir Nevill as head of the Cavendish in 1971, said he had been a leader for 45 years and had started innumerable schools of thought. Sir Nevill began his work on non-crystalline solids such as polymers for which he shares the £83,000 Nobel prize in the mid-1950s.



Sir Nevill Mott

Funds for policy institute top priority, SSRC told

Find-raising for the proposed policy studies institute has top priority, Mr Derek Robinson, chairman of the Social Science Research Council, will tell the council which is meeting today.
He will urge members of the council to stimulate interest among their industrial contacts in the SSRC's £5m "Bellish Brookings" project. Mr Robinson, of Magdalen College, Oxford, has meetings planned with Aston, Loughborough and Brunel universities and the Institute for Social Studies, Leuven, Belgium, and Sir Colin Mosser, director of the Council of Economic Advisors.
In two weeks' time Mr Robinson is to meet representatives of a major independent policy institute in London—the Centre for Social Policy, which is the British Economic Planning Institute. The panel believes the SRC's training responsibilities should be discharged independently and not regarded as a means of implementing its research support function. It recognizes that it resources not to support academic research groups via the quota system or to have to be replaced from research funds or other sources. The example SRC research grants could have one or more research fellowships attached.
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Lender, page 10

America confronts race issue

continued from front page
A vast number of people have interest in the outcome, and a record number of 53 briefs, representing 160 groups, have been filed with the court. The most important testimony is that of the Government.
On Wednesday the Justice Department argued forcefully that race can and should be taken into account in determining university admissions. It opposed "rigid exclusionary quotas" but upheld numerical goals. It said, "The Bakke case itself was not one on which to base any judgment about the constitutionality of affirmative action programmes. It was a case concerning the case back to California for further review.
The Government brief has been praised by blacks but criticized by many others for being too firm and sidestepping the issue of quotas. Fresh and powerful support was given to it however last week by one of the most authoritative educational "think tanks" in the country—the Carnegie Council on Policy Studies in Higher Education.
The council released a detailed study of selective admissions, drawn up by the Educational Testing Service—the body that administers most of the tests on which Bakke bases his claim. Significantly the study reaches almost exactly the same conclusions as the government, though approaching the matter from economic, not legal, considerations.
"Black K&T, the council chairman

and former president of the University of California, said race should be taken into account in admissions. The council and K&T believe tests are useful but insufficient in themselves in deciding admissions. Student selection should be in two phases: first, determining the pool of qualified applicants who were able to do the work at college, and then picking students from that pool.
The Carnegie council argues that nobody should be admitted who is not able to cope with university work, but admissions officers should each look on a case-by-case basis at the four points: the extent of an applicant's educational disadvantage, his social disadvantage, his knowledge of other cultures and his possible contribution to a graduate to an underserved sector of society.
Carnegie represents mainstream liberal academic thought on this case. Its position is similar to that of most major universities, liberal newspapers such as the New York Times, and Washington Post, and of civil rights activists. But the country as a whole takes a harder line.
A poll found overwhelming public opposition to any special programmes for minorities and through a predominantly black town such as Washington has been holding public demonstrations in "overturn Bakke week," feeling is running strongly throughout the country in his favour.

Wide variations in local grant policies

Only one local authority in England and Wales automatically pays course fees for Open University students, according to a survey of local education authority awards carried out by the National Union of Students.
Thirty-one authorities said they did not pay fees, one paid in accordance with regional agreed policy, two considered applications on merit, 14 considered hardship cases and there were several other variations.
"This study, which is based on a questionnaire sent to local authorities, shows the wide variations in practice and principle in the award of discretionary grants.
Grants Handbook Volume 2: Survey of Local Education Authority Awards 1977 is available from the National Union of Students, 3 Endsleigh Street, London, WC1, price £2.

NEXT WEEK

Interview with Lévi Strauss
Teaching academics to teach
David Cauter on the New Left
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New teaching companies form

Four new teaching companies are to go ahead with the joint support of the Science Research Council and Department of Industry. They will be the Teaching Company Programme started on a trial basis in 1975.
The four new ventures are based on a partnership between an academic institution and an engineering firm, like those announced previously. They are:
● Oxford University with Rankine-Hillman-Pullard, Northamptonshire, will start next year with an initial investment of £117,000 over three years.
● £16,300 from the University Grants Committee. Three research associates will be recruited in work on new methods of manufacturing water pump bearings for cars.
● Glasgow University with James Lindwood Limited, Glasgow £17,000 over two years. These researchers will work on the manufacture of large fans and compressors, with Mitchell Bearings, Newcastle (a Vickers subsidiary), £17,000 over three years. Three associates will be recruited now and another three next year to help set up a new factory to make bearings for marine engineering research and training.

CNAA to give colleges more say on course validation

by Peter David
The Council for National Academic Awards is to revise its procedures for validating degrees and diplomas to enable "academically mature" polytechnics and colleges to play a larger part in the scrutiny of their own courses.
A small working party has been set up under the chairmanship of Dr. Edwin Carr, the chief officer, and will meet for the first time next month. It has been given until May 1978 to recommend changes in the present system of validation that will delegate more responsibility to individual institutions but preserve the CNAA's overall control of academic standards.
One of the most revolutionary changes being considered is the establishment of validating committees in colleges to vet new course proposals. The committees would include a substantial number of CNAA nominees and their recommendations would have to be ratified by the appropriate CNAA subject boards.
An officers' paper prepared by the council argues that the presence of CNAA nominees on the college committees would overcome the tendency of existing internal vetting systems to become "bureaucratic and managerial" rather than "academic". It would also mean to practice that the council's subject committees would no longer have to ratify recommendations coming out of the validating committees.
The CNAA believes that the greater advantage of such a scheme is that it would enable it to develop a closer knowledge of individual institutions and judge their degree of academic maturity. It could lead, the report says, to "the establishment of an atmosphere of confidence and a degree of collaboration that would permit the institutions to develop its procedures for proposing and monitoring courses and thereby become more responsible for maintaining academic standards."
continued on page 20

London convocation votes against press closure

London University convocation this week voted by an overwhelming majority against proposals to close the Athlone Press.
The joint committee of the court and senate for collective planning recently proposed the closure of the press, which publishes books of value within the university. The press might otherwise find a publisher.
JET prepares for Culham touchdown
The two-year-old row over the siting of JET, the £120m European thermonuclear fusion project, is likely to be settled at a meeting of the BEC research council on Tuesday.
The British and German prime ministers agreed this week to a bid by a majority vote of the council. The United Kingdom candidate, Culham, is expected to win, in return for an assurance that any follow-up fusion project will be sited at Garching in Bavaria.

Poly 'third force' idea collapses

by Peter David

Attempts to strengthen the collective voice of the polytechnics by setting up a national association of governors collapsed last week in the face of opposition from the Committee of Directors of Polytechnics and the Council of Local Education Authorities.

Governors decided not to go ahead with the new body after representatives of only 13 out of the 30 polytechnics turned up at a seminar in Luton to discuss a draft constitution. The seminar, sponsored by North Essex London Polytechnic, broke up prematurely when the governors present voted overwhelmingly against forming an association.

Mrs Williams presses tertiary case

by Patricia Santinelli
Tertiary colleges have one effective response to the necessity to examine present sixth form provision which the projected decline in the number of 16 to 18-year-olds had required, Mrs Williams, Secretary of State for Education, said last week at Leighton College, Herts.

"In the sixth form college or tertiary college, with an average of over 200 pupils, it is possible to offer 40 or more A-level subjects economically, since teaching groups will be of a reasonable size", she said.

She added that the tertiary college also had the advantage that academic and vocational courses, full-time and part-time, could co-exist in the same institution.

Ulster gets the message

A more appropriate form of education can be provided for 16 to 19-year-olds, especially early school leavers, by ending secondary education at 16 and replacing sixth forms by tertiary colleges.

The Opportunities for Sixteen Study Group urge this in their submission to the Education and Library Boards in Northern Ireland which are charged with the reorganisation of post-primary schools within their own areas.

Tertiary colleges would, as in the National Foundation for Educational Research report, provide the opportunity for students to study for both 'short-time' and 'long-time' courses, and to incorporate the best features of existing sixth forms and further education colleges.

Within this framework tertiary colleges could be set up, either from existing schools or from new ones, but it is essential that they should be purpose-built, the group said.

support a new association with public money. The CDP, too, refused to meet members of the working party. A letter from Mr P. L. Flowerday, the committee's secretary, said: "The CDP does not wish to be associated with a subject in the process of developing a new line of thought which may or may not prove to have the backing of the majority of the chairmen of governors."

Instead, the CDP has decided to stage a joint meeting with chairmen in mid-November. A circular letter from Mr Arthur Suddaby, chairman of the CDP, described his policy as working through quiet diplomacy and reason, rather than "the adoption of challenging public postures".

But the CDP's initiative failed to satisfy advocates of the new association, who took offence at last year's performance of the committee. Dr George Brown, director of NELP, said that the CDP had not been consulted by the Department of Education and Science about student numbers, overseas student quotas and other matters of major concern to the polytechnics.

'Zionist' groups outlawed as anti-Jewish trend grows

Students at the School of Oriental and African Studies in London University, voted last week to outlaw any 'Zionist' society as the campaign against Jewish students intensified.

This week students at Warwick University, Brighton and Newcastle polytechnics were due to vote on motions which condemned Zionism and anti-Semitism. Such motions have also been passed at the banning of Jewish societies from some student unions, since the National Union of Students has a policy of "no platform" for racist or fascist.

The arguments between Arab supporters and their ultra-left Jewish opponents on the one hand and Jewish students on the other have become fiercer this term with the prospect of a discussion of Palestine, which the union has no policy, at the NUS conference.

Last Thursday's meeting at SOAS agreed to submit a motion to the conference that "racism is not peripheral to Zionism but central and fundamental to it". The motion also condemned organisations to "recuse themselves and facilities to societies whose aim is to propagate Zionism and organize support for the state of Israel".

Hopes for Preston in-service training

Lancashire County Council hopes to retain a substantial programme of in-service training at Preston Polytechnic, despite the Government's decision this summer that initial teacher training should be done elsewhere.

A spokesman for the council said this week it was thought that the redeployment of much of the in-service training on the polytechnic's Chorley campus would be a sensible use of the site. It might, even be possible to increase the in-service training unit already one of the largest in the county, mainly for the needs of the county but also for other authorities.

The Department of Education and Science has expressed an interest in what happens at Preston but the council is to the council to take the decision.

Graduate job guide

Over 2,000 employers of graduates are listed in the latest edition of the *Employment and Training Careers* published this week by the Careers Research and Advisory Centre. It outlines details of jobs by their relevance to degree subjects, the kind of work they entail, their geographical location. London: Heinemann Press (Oxford) Ltd., Basingstoke Street, Cambridge CB2 1RZ. Hardback £2.00, paperback 60p.

He went on: "No doubt documents have gone backwards and forwards, but there has been no real voice to speak for the polytechnics at a political level before the decisions of principle have been taken. In that way the CDP, I am sorry to say, has not been at all effective. There is a crucial need for a democratically-based organisation to determine polytechnic policy before it is determined for us."

Admirer A. P. G. Edwards, chairman of governors at NLEP, said the CDP's offer to stage a joint meeting with governors had come only after the governors had proposed setting up an association of their own. "I do not think that governors of polytechnics are of such a trivial nature that they can act only when the CDP asks them to act", he said.

His view was echoed by Mr John Diamond, chairman of governors at North London Polytechnic. Mr Diamond said the absence of a collective voice had prevented governing bodies from making representations to the Oxford Committee, which the CDP was reported to have told Oakes that the polytechnics favoured a more towards control.

NELP staff withhold tuition

Jewish students at SOAS started to force a Jewish Society at the beginning of the term. They intend to press ahead with their request that the society be set up despite the union's new policy.

Miss Sue Silpman, president of NUS, urged the meeting at SOAS not to pass a motion which would deny union facilities to Jewish societies. Referring to the banning of Jewish societies at Salford and York universities she said: "I want to make it absolutely clear that this happened at Salford and York was not an anti-Semitic and anti-racist fight against the Jews. The union of Jewish students will lead to an outbreak of anti-Semitism, though the lackers that they are anti-Semitic."

In many universities, for example Reading and Cambridge, Jewish societies were this week taking an initiative by putting down motions supporting their policy of self-determination for all peoples in the Middle East.

The NUS executive has not yet decided its policy on Palestine though it has prepared a response to the question which will be presented to the conference.

More students now joining party—Benn

Students were joining the Labour Party in ever-increasing numbers, Mr Wedgwood Benn, said this week when he launched a campaign by Labour's National Organisation of Freshers' Students to attract "freshers" to the party.

Mr Benn compared the state of the Labour Party this year with 1968 when young activists were protesting for community work and protest politics. The new appeal of the Labour Party rested on its ability to explain the causes of unemployment and to suggest remedies, he said.

The Labour students' organisation is arranging with its local sections a series of meetings with Labour MPs, including Mrs Williams, Education Secretary and Mr Benn, Secretary of Health and Social Services. These will take place at universities and colleges during the next two weeks.

The focus of the recruiting effort will be technical colleges and colleges of education. The policy of the NOLS is explained by Mr Michael Gapes, the Labour Party student organizer, is to end the binary system, to make universities open to all, to make them more sensitive and democratic and disadvantaged young people to open up.

The NOLS claims 5,000 members in 92 affiliated clubs. The committee of the Federation of Communist Students.

Union fight hard for recognition
by Judith Judd

Referenda are being held in polytechnics this week by the Association of Polytechnic Teachers to gain recognition for their union.

The union, the Association of Polytechnic Teachers, is fighting for recognition for its union. The union, the Association of Polytechnic Teachers, is fighting for recognition for its union.

Cardiff lecturers call for total college reform

Lecturers in the Cardiff branch of the Association of University Teachers have expressed grave concern about the government of University College, Cardiff and have called for its complete reform.

The association joins the college's non-professional staff in calling for the revision of regulations governing appointments committees.

The remarks form part of the association's response to the Franks report which was prepared after a dossier had been found by students that showed two lecturers had been approached by the college principal, Dr C. W. Bevon, before advertisements for their jobs were issued.

Academic job chances 'are virtually nil'

Job opportunities for graduates in the academic world have virtually disappeared because of the spending cuts and the small number of lecturers at retiring age. This is one finding of a report published this week by the Central Services Unit for University and Polytechnic Careers and Appointments Services.

Mr Brian Pugh, the unit's director, said the academic world was now a major area, along with public service, where opportunities for graduates had declined dramatically.

"In the mid-1960s, if you had a PhD in science or engineering you had a 50-50 chance of getting a first post in a university. If you had a PhD in arts or social studies you had an 80 per cent chance. These opportunities have now virtually disappeared."

There has, however, been only a small drop in the number of first-degree graduates going on to further academic study.

The report's statistics are an extension of those first released by the unit in July and show that the number of graduates are taking work which graduates are taking. Women are catching up with men in the attainment of degrees.

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Tories stress standards

Colleges of education should place emphasis on training in literacy, numeracy and the maintenance of discipline, the Conservative Party at its annual conference in Blackpool decided this week.

At the end of a debate on reorganization of schools, the party's education spokesman, Mr Roger Dav, of the University Students' Committee, said the committee's research showed that the proportion of women taking degrees was levelling off. Evidence on the numbers of girls staying on in the sixth form suggested that it was likely that women would reach parity with men in this area.

The figures showed that women were going into a much wider range of subjects than previously. In 1976 training to substantial numbers and women went instead into industry.

Chemists stay out

Many fewer chemistry students are being admitted to British universities than in the late 1960s, although numbers have picked up since the nadir of 1974, Mrs Williams, Secretary of State for Education, said this week when she opened the centenary exhibition of the Mid-Anglia Group of the Royal Institute of Chemistry.

During the summer Dr Silpman described the conflict between competing professional judgments. The social work tutors did not think Mr Vyas suitable for admission to the course but the Newman education welfare department deemed him a good social worker.

Mr Vyas is an education welfare officer of the London Borough of Newman, one of the authorities funding the polytechnic.

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Two reports ask Government for more adult literacy funds

Pressure is mounting on the Government to provide additional funds and a long-term policy for the development of adult literacy.

Two reports published this week both urge it to continue allocating specific funds for adult literacy as an annual £1m grant from the Department of Education and Science ends in March next year.

One of the reports from the British Association of Settlements, censures the Government for its "lack of foresight" in not following up its two-year pilot-reading course with a comprehensive policy on adult literacy.

Blue roses for the Red lady

Mrs Sue Silpman, the Communist president of the National Union of Students, ventured into a stronghold of student conservatism on Sunday and received an enthusiastic reception.

Her message to the Cambridge University Conservative Association appeared to be that Conservatives and Communists must march forward in the cause of democracy and get people involved in student unions. We have a collective responsibility, she said.

What had she to say about the election of Sir Keith Joseph from last December's National Union of Students' conference? She condemned it completely.

Was not the ballot a fairer way of taking decisions than the open meeting which was open to exploitation by an unscrupulous few? Mrs Silpman thought there were problems in achieving a full discussion of the issue if only a ballot were used but she attacked fiercely attempts by the ultra-left to exercise "mild control" in student unions.

Was she worried about her label as Communist president of the NUS? No, it was a factual description, Mrs Silpman said. In the last analysis, being president of the union came first.

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Grass roots contact urged for MSC

The National Union of Students has urged the Manpower Services Commission to re-examine the organization and education of its training schemes, to ensure that all young people, including the unemployed, are effectively reached.

In its submission to the MSC "Education, Training and Employment: A Cooperative Approach", the NUS recommends that substantial powers should be devolved from the proposed regional boards to "community forums" operating at local level.

This would require each of the 21 Area Boards to identify localities based on LEAs social facilities catching up with the needs of the local population of the six-monthly forums. Each local unit would be run by a community forum composed of representatives of trade unions, employers, LEAs, educationists and youth organizations, but would be attended by MSC staff formally responsible for managing the schemes.

Apart from overseeing the practical implementation of the programmes the forums would be informed of their employment and continuing educational opportunities when they leave the schemes.

To ensure that these schemes will reach all young people, the NUS believes that more "outreach" staff—who will identify young registered unemployed—than the proposed 20 must be appointed. It recommends that a number be appointed by each board.

It also emphasizes the importance of youth forums as proposed by the British Youth Council and recommends that a representative should be appointed as a full member on both NUS and BYC representative on the National Manpower Board could also make a positive contribution.

Ulster to launch community action project

A three-year community action programme is to be launched by the New University of Ulster Institute of Continuing Education.

The project aims to provide educational and research assistance to community groups, and to encourage greater involvement in community affairs through the use of local radio.

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Think again on young jobless

Pressure is growing for the Manpower Services Commission to think about plans for administering the Government's new £100m year training programme for the young unemployed.

Both the Council of Local Education Authorities and the National Association of Teachers in Further and Higher Education have said that the number of regional boards MSC proposes—21 in all—will be too few to co-operate effectively with local education authorities and colleges taking part in the training schemes.

A NATFHE document submitted to the MSC says that even where it proves impossible to increase the number of boards, the MSC should create "an effective sub-structure at a level which can genuinely be described as local".

The NATFHE also asks for the right to nominate members to sit on the major boards.

The CLFA, too, is anxious about the remoteness of the boards the MSC hopes to establish. At a meeting last week with Mr Richard O'Brien, chairman of the MSC, O'Brien teams created by the commission to administer the scheme should include "link men" allocated to each local education authority.

Both the CLFA and NATFHE are expressing concern about the possibility of regional boards being too far from the colleges and the young unemployed.

Increase found in library use

There has been a marked increase in the use of academic libraries over the past four years, according to a survey published last week by the Library Management Research Unit based at the University of Loughborough.

Four libraries took part in the two-day survey, which followed a detailed study of 11 libraries in 1973. In all four cases there had been a considerable increase in students using its books, issued and easts occupied.

The report welcomes attempts being made in both sectors to encourage newly literate students to go on to further education. But there is criticism of the weak role of vocational colleges in adult literacy.

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North American news Government/campuses relations to be probed

front Michael Binyon
North America correspondent

WASHINGTON

An investigation has started to try to find out why relations between the US Government and higher education are so bad. The Alfred P. Sloan Foundation has allocated \$2.5m to set up a high-level commission to find ways to a more productive and less conflict-plagued relationship between the two.

The commission will be chaired by Mr Louis Cabot, a member of the Massachusetts Institute of Technology Commission. The director of the research will be Dr Carl Kayser, professor of political economy at MIT. Dr Kayser was director of the Institute for Advanced Study for 10 years after serving in the White House under President Kennedy.

Outlining the work of the commission, Mr Cabot said serious conflict has arisen in recent years between the Federal Government and broad segments of higher education over the subject of regulation. Presidents of leading research universities, public and private, and heads of small liberal arts colleges expressed the same grievances.

"The objectives which most of the relevant government regulations seek to achieve are not at issue. They are endorsed no less broadly within higher education than within American society at large. But colleges and universities themselves will have, of course, to find ways to perform their primary functions as best they can."

For their part, Mr Cabot said, legislators and officials at both Federal and State level found it hard to comprehend the lack of understanding by academic administrators and faculties of the necessity for government action, and the responsibility for those who are responsible for authorizing it and overseeing its expenditure.

To help the commission, 22

West Germany Colleges face autumn of unrest

by Günther Kloss

The predicted "hot autumn" in West Germany's universities and colleges is now almost certain. A three-day extraordinary meeting of the Vereinigung Deutsche Studentenschaft (VDS) (the West German National Union of Students) has decided to call for a nationwide 14-day boycott of lectures beginning on November 28.

The strike is to culminate in a "day of solidarity" which will coincide with the third and final reading of the Baden-Württemberg law. The only question is how far Germany's 84,000 students will follow the strike call from the left-influenced VDS which has been opposed by the Christian Democrat Students' Association.

Students are justifiably worried about their financial plight which even the recent grant increase has hardly alleviated. Many are equally concerned about their employment prospects (THESE, October 7).

However, most of the current protest is more immediately politically motivated. It is concerned with the adaptation of many of the existing *Land* university laws to the Federal Hochschulrahmengesetz (General Framework Law for Universities) which is now under way.

Students consider many of the provisions of this compromise Federal legislation to have been designed to curb their freedom and the influence of the student organizations.

For example, many *Land* Governments now propose to dissolve independent student unions. The student groups of all political persuasions opposed this move. But, like the RCDs, the conservative students' associations, are asked to be allowed to retain the right of the student bodies to pronounce on matters directly affecting them, the more left-wing groups themselves admit that they are producing more teachers, doctors, architects and engineers than are needed.

Some of the universities therefore favour the move which they see as their own freedom to expand.

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Australia University ills: 'the students to blame'

from Robert Milliken

MELBOURNE

The biggest problem facing Australian universities is the students themselves: they are too young, too naive, they lack a respect for tradition, they do not understand the traditional purpose of universities, and they want to change the world without trying to understand it.

This, at least, is the conclusion of a major survey of Australian tertiary education carried out recently by a leading social critic, John Douglas Milliken, who presented a three-hour programme on the Australian Broadcasting Commission.

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RESEARCH Leicester plumbs violent secrets of outer space

by Clive Cookson
science correspondent

Leicester University's X-ray astronomy group will shortly be publishing a new and "deep" survey of extragalactic X-ray sources, which appear to include some of the most violent objects in the universe.

The survey is based on observations from the group's X-ray telescope on board the United Kingdom satellite Ariel V, launched in October 1974. The telescope cannot see the Earth's surface because the atmosphere absorbs cosmic X-rays.

The X-ray picture of the sky becomes clearer with each orbit of Ariel V, as the exposure time increases. The Leicester catalogue, to be published in the "Monthly Notices" of the Royal Astronomical Society, includes almost 100 X-ray sources outside our own Milky Way galaxy, detected over the satellite's first 10,000 orbits. The telescope is due to keep operating until at least 20,000, by which time a good deal more information should have accumulated.

Comparison of the results with observations from giant ground-based optical telescopes, in particular the 3.9 metre Anglo-Australian telescope in New South Wales, has identified some of the powerful X-ray sources with Seyfert galaxies — giant star systems with extremely bright nuclei emitting tremendous quantities of radiation.

Professor Ken Pounds, director of the Leicester group, thought the discovery that Seyfert galaxies are strong X-ray emitters and therefore one of the most powerful energy sources that had previously been realized, was one of the most interesting results of the survey.

Early discussion of the results favours the theory that these X-ray sources are due to accretion of matter from the Big Bang that started the universe, or powered by extremely massive collapsed objects — probably

Don's diary

China then and now

How can I best entertain you? By talking about my hilarious seminar last year on political violence, with a red haired Maoist girl, a black-headed Trotskyist, a Marxist Irish republican and an Inspector of Publicity in a Transhull scholarship, all of whom (thanks largely to the fire) got on like brothers and sisters?

Or shall I — we are getting warm — tell you about a week in China, with a car to myself, an interpreter to myself, on open request to say what I wanted to see — which was honoured to the day with the army? Ara you sitting comfortably? Then we'll begin.

I was in China before the fall of Tung Hsiang-Ping in 1976 so, perhaps paradoxically, Chinese attitudes at that time were probably closer to those of today, now that he is being hailed as the hero of the intervening year. Certainly Chung Chün-Chiu (of the Gang of Four) was writing freely and was regarded as a leading theorist. One was conscious, however, of the Chinese as "Puritans" and "Pragmatists" rather than left and right.

When I was teaching in 1974, they said: "Tell us about the Sino-Soviet split." You must be joking. You tell me! One of the three girls students fixed me with a sweet but firm stare and said "You talk — we listen". So I did, but as an international relations man when I did go to China I learned about their attitude to the Soviet Union (following directly from this) to the EEC; and as a social scientist I was intrigued by their internal problems and their prospects for stability and prosperity. I found them refreshingly ready to discuss and, indeed, to argue about both.

At no time did I pretend to be another ignorant Marxist don. I went in — and came out — as a convinced pluralist, anxious to learn about the Chinese and to be as fair as I could (or do I believe) that our parliamentary system would be better for them than any Chinese ever suggested to me that Maoism would be better for us.

Dons labour, too

This same theme took up some part of another highlight of my visit which was at Chung Chün University in Canton. Here I was met by four professors of history, philosophy, mathematics and theoretical studies who had, like me, held their own among arty, be they at Harvard or UCL.

As a tutor for admissions I was especially interested in their selection procedures, and in the major part played by the candidate's performance on the shop floor or in the fields. No one qualifies for university until he has done at least two years work in a factory or a commune. I wish we did the same. Dons too?

But the most fascinating part of our discussion was about the history of revolutions. The Chinese have a tremendous feel for history, and this was why — they had asked me in advance what I had picked to discuss — I had picked this subject. Could they say, I had asked, why the French and Russian Revolutions had departed so far from their own people and to educate the new generations from childhood, to remove all vestiges of bourgeois ideas and aspirations, of greed and ambition, of interest in their own security and a desire to give their own children a good start.

The professors of history and philosophy were quite clear about this. In both France and Russia the revolutionary parties had fallen into the hands of "bad men" who had used them to consolidate their own positions but, more importantly, they had failed to re-educate their own people and to educate the new generations from childhood, to remove all vestiges of bourgeois ideas and aspirations, of greed and ambition, of interest in their own security and a desire to give their own children a good start.

Study urges harder line on Soviet academic exchanges

The Soviet-American exchange programme is "seriously flawed" with unacceptable restrictions placed on Americans studying in the Soviet Union, says a new study. The American Government should take a much tougher line in fighting purposes of cultural exchanges, and should even consider sending back Soviet scholars in retaliation.

The study, by a New York research foundation called the Twentieth Century Fund, paints a gloomy picture of Soviet-American exchange programmes. It says the Russians have consistently denied American researchers proper access to libraries and archives, have forced them to indulge in "hypocrisy and subterfuge" in order to gain entry to the country and have placed unacceptable political limitations on Soviet artists and scholars travelling abroad.

The report says the United States should no longer "passively accept" Soviet limitations on American researchers. Cultural exchange agreements, it says, should be renegotiated, providing for a wider range of research areas, elimination of outdated restrictions, and the cancelling of some exchanges that have proved unproductive.

It says there has been no proper

Study urges harder line on Soviet academic exchanges

evaluation of the programme since they began 20 years ago. The result is that too much has been expected of them, and the benefits have been weighted very much in favour of the Russians.

The report believes Soviet-American exchanges are valuable and should continue. But they urgently need re-examination in the light of three recent developments: the Helsinki agreement on cultural contacts, a detente and the Carter administration's support for human rights.

On their side, the Russians appeared to want three things from the programmes: scientific and technical knowledge, prestige and hard currency.

The report criticises the one-sidedness of the exchanges. Soviet scholars have the same access to American libraries and libraries in the United States as Americans; but Americans are denied visas to study a wide range of areas the Russians regard as politically sensitive.

It says the United States should be more assertive in the renegotiating of the programme, with a view to the elimination of outdated restrictions, and the cancelling of some exchanges that have proved unproductive.

Ways of saving the parrot

by Peter David

Three students from North East London Polytechnic have returned from a month-long expedition to the Caribbean island of Saint Lucia with a list of recommendations to the Government to save the world's rarest bird, now threatened with extinction.

The students, who were accompanied by an artist, explored the mountainous regions of the island which have become a refuge for the parrot. In the course of the month they made 142 sightings, and estimated that the remaining population of parrots may have dwindled to as few as 100.

Because of its exceptional beauty — it has a bright blue head, green plumage, a scarlet breast and a yellow tail — the parrot is a popular pet and is often captured for sale to visiting Americans. One of the team's main recommendations to the Government is that it should set up a bird sanctuary on the island and try to breed them.

Other recommendations include razing the fine imposed for capturing or killing parrots, and the establishment of a prohibited zone where they can live in peace.

None of the recommendations will involve large-scale expenditure. Mr Paul Butler, one of the students on the trip, said the Saint Lucia Government was extremely helpful, but did not have the money to spend on conservation.

Ways of saving the parrot

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The Russians

Why are they so determined to keep Russia's arms length? First, because they fear ideological contagion; they fear that their senior party members and cadres (i.e. the management officials and other staff) will be lured away from their activities by the desire to emulate their comfortable Russian opposite numbers, with their privileges, their *dachas* and their middle-class lifestyles. (The Russians, of course, fear that their own masses will become resentful of the privileges of their "betters" because of the contrast with China.)

Second, the Chinese are actually aware that the Russians are "bidding them in the Third World." The Chinese offer aid without strings and present themselves as a follow-developing country which can help out for the very reason that they have found a way to pull itself up by its own bootstraps; but they realize that the Russian ability to offer arms, money and modern technology is far more attractive.

Third, they fear that in the long term (by 1999?) Russia will have emerged as the stronger and more dangerous of the two superpowers, on the grounds that: Russia's "superior" monopoly state capitalism is directed by a disciplined population, which they think is bound to be more efficient than a pluralist state with General Motors competing with Ford and Democrats cutting the throats of Republicans; in other words they are all sure that a mere "imperialist superpower" is bound to be outstripped by the "socialist superpower" as they also call it.

They see the decline bottle years before it is completed.

Give me a child . . .

This answer was fully to accord with what I had seen during the previous week, over the factories, the villages, the housing estates, the schools, the kindergartens, when a mother had a baby, she had 55 days' maternity leave. Thereafter she returns to the factory or the fields and the baby spends most of every working day in the crèche (two months for the first three years and then the kindergarten (3 to 6) and the schools.

They make no secret of the aim — which is to change the nature and outlook of the child, even further than the Jesuits do ("Give me a child for the first seven years and you may do what you like with him afterwards"). They regard this as fundamental because, on one who has not been through this process will have the "correct" attitude. So their revolution will be complete — 1999 — before it is completed. They are just over half-way. Until the top managers and officials are 50 are people who themselves grew up as babies under the party, the revolution will not be secure.

But, I asked the professors, will not man turn again to sin? Will not people look for greater rewards for harder work? For the chance to do their best for their own children? For security? And (some at least) for power and influence? Is not this human nature? And can you hope to change human nature in 50 years?

"We don't know," said the professors, with great earnestness. "No one has ever succeeded before, which is why no revolution has ever survived. If we fail, our revolution too will fail. We must succeed."

So, following from this education — which continues for life through the weekly political discussion groups in almost every community — it is logical that in China the selection of candidates for anything, for university, for promotion, for whatever, depends first on his "political attitude". Skill, ability, experience — all these are secondary. Above this they make no bones. "Will the Chinese make it? Will their revolution survive? Will they become a Utopia or an anti-utopia or a drab and cheerless police state like so many others have done?"

If I live to be 83 I may find out, but no one who knows the Chinese can fail to see and admire what they are doing. I wish them luck. And I, for one, am very happy to grasp the hand of friendship they extend to Britain.

West Point under fire

The United States military academy at West Point should offer new courses on ethics and sex education, produce a series of football team and develop a series of lectures, according to a sharp criticism by a group of generals of the 75-year-old academy says it is suffering from poor morale, a lack of supervision and planning, overburdened cadets, resistance to change, intellectual in-

Strong criticism of proposed 'bugging' law

from Lindsay Wright

WELLINGTON

The Security Intelligence Service Amendment Bill currently progressing through New Zealand's Parliament has drawn a sharp rebuke from the Victoria University of Wellington Council.

Contentious clauses provide for the Minister-in-Charge of the SIS (currently the Prime Minister) to authorise the interception of information by tapping telephones, monitoring private correspondence and to direct any person in the State

Strong criticism of proposed 'bugging' law

members and students who used to give the SIS such a good name.

The restriction on the power of the SIS in regard to the interception of information would cause a serious loss of confidence in the SIS, the Council said.

The University Council is three dissenting voices against the Government's proposed Bill, and will now send a letter to the Government asking it to withdraw the Bill, and will now send a letter to the Government asking it to withdraw the Bill, and will now send a letter to the Government asking it to withdraw the Bill.

New device aids stammerers

Several years of spare time research by an Edinburgh University team has resulted in a successful device to help intractable stammerers who do not respond to standard therapy for speech fluency.

After extensive trials which had a 90 per cent success rate the team produced the device, christened "Edinburgh Masker", which is now being marketed by a firm in Perth.

It consists of an electronic box linked to a small motor which sits around the neck, together with a small microphone or dictaphone microphone.

It works on the principle that, as standing by a waterfall, noise impedes the removal of the speech signal. The masker operates on this basis by producing a buzzing sound automatically triggered off by the sensor detecting vibrations of the vocal chords. This sound is superimposed via the microphone before the speaker hears his own voice.

Although producing no permanent improvement in speech fluency, it does, however, give a beneficial benefit around 500,000 people in the

New device aids stammerers

United Kingdom who suffer from an enduring speech impediment.

Speaking about the project, Dr Duncan Dewar, senior lecturer in the department of physiology and a member of the research team, said: "Just as spectacles improve poor vision, this device improves poor speech. When it is removed the defect continues. But maybe over time speech fluency will be established permanently even after the masker is removed."

The project started from a decision to investigate the failure of previously designed apparatus. This led the team, composed of Dr Dewar, Mrs Ann Dewar, a speech therapist, and Mr Jack Austin, an electronics engineer, to develop an AFM machine incorporating an automatic device. Previous equipment had allowed the subject direct control and had proved ineffective.

The new device was carried out trials with over 300 subjects, which demonstrated that the new feature permitted fluent if rather monotonous speech. Following this, a portable version was designed by Dr E. E. Smith, of the department of medicine, and Mr Austin.

Richard Clutterbuck

The author teaches politics at the University of Exeter.

10/11/77



LETTERS TO THE EDITOR

Central institutions under attack

Bakke case

Bogged-down Brookings

The all-too-familiar way in which the "British Brookings" has been sucked into the murky morass of social science politics may have been easy to anticipate. But this does not mean that the past and sequence of events in the spring and summer is less depressing.

It now seems unlikely that an institute on the lines of the Brookings Institution will ever be established in Britain. The best that can be hoped for is some modest enhancement of policy studies within higher education and some, probably equally modest, redirection of priorities to favour independent policy institutes such as Political and Economic Planning (PEP) and the Centre for Studies in Social Policy (CSSP) which are now on the verge of amalgamation.

Some will argue that this outcome merely reflects the profound differences between political culture in the United States and in Britain. It does. But this broad conclusion also encourages complacency because it absolves us from enquiring too deeply into the detailed reasons why the proposal for a policy studies institute has become bogged down.

Three factors seem to have been particularly influential in bringing about this unhappy state of affairs. First, the concept of policy studies rests on two poles: the Government and other agencies which actually make and carry out policy, and universities and colleges, which provide the academic insights that fashion and correct its broad direction. Yet the idea of a British Brookings seems to have aroused no interest let alone encouragement in Whitehall or the town hall. There has not been the slightest suggestion that the proper relationship of trust between Government and institute necessary to make a success of the venture would ever be tolerated.

Second, the social sciences establishment began by receiving Professor Dahrendorf's proposal with ill-judged bad grace and seemed to make no secret of their naive suspicion that it was an attempt to aggrandize the reputation of the London School of Economics. When it became obvious that there was genuine interest in the idea of a British Brookings and that their suspicious about institutional aggrandizement were quite unjustified, they were forced to take the proposal on board but did so reluctantly.

The reluctance of the Social

Science Research Council in particular, can perhaps be explained by the fact that its acknowledgement publicly the need for a greater investment in policy studies could be interpreted as an implicit admission that previous SSRC research initiatives had been something less than successful. That would not be an entirely unfair conclusion to draw.

In the admittedly difficult but fashionable game of matching research priorities to national needs the SRC has perhaps been a less skilful player than the other research councils.

Third, by the time all the sectional interests had had their say and all the special pleading had been heard the definition of policy studies, which in Professor Dahrendorf's original proposal had been admirably clear, had become hopelessly blurred. Some argued that the existing policy institutes, like PEP or CSSP, should not be ignored; others that it would be wrong in the British context to have one monolithic Brookings with a too-close relationship with Government. Several other arguments for going slow on the idea of a British Brookings were put forward. Individually many were sound and sensible; taken together their effect was tendentious and negative. The whole idea of policy studies has been watered down until it means not much more than giving a greater priority to research in areas that seemed to have the most direct implications for social policy. In other words a new package rather than a new product.

In his original proposal for a British Brookings Professor Dahrendorf suggested that one of the tasks of such an institute might be to try to define the "British disease", our national failure to keep up with our neighbours in Europe. Perhaps this was unwise because it inevitably provoked a chauvinist response. Yet the whole policy studies episode itself is a fine demonstration of many of the things that are wrong, the arbitrariness of ideas and the immobility of institutions that underpin them.

There is perhaps still time for a more positive approach to be adopted to the question of policy studies. A lot is at stake. Continuing delay and failure would cast doubt on the efficacy of one of the present organizations of research in the social sciences. More important than that, the failure to establish a British Brookings would demonstrate the virulence of "the British disease" which it was supposed to help to cure.

Wider brief for SRC?

In 1972 the Government defined the purpose of research funded from its science budget as "to develop the sciences as such, to maintain a fundamental capacity for research and to support higher education". It said the primary aim of the Science Research Council should be "to sustain the standards of education and research in the universities".

Since then, the SRC's reputation and its ability to attract research funds have declined. The SRC's research portfolio has been reduced to a few areas: engineering, manufacturing, and technology. The SRC is now seen as a body that is too narrow in its focus and too slow in its response to the needs of industry.

The SRC should be asked to consider a wider brief. It should be asked to support research in areas such as the training of scientists and engineers for industry. Now its engineering board is considering large-scale support for advanced courses on which students undertake no research at all.

Engineering has felt the pres-

Library development

Sir—James Thompson *THES*, September 30, arguing for earmarked university grants, chooses two very arbitrary targets for library development: 7.5 per cent of the total library budget for books and 100 volumes per full-time student. Until a scenario convincing than his bald statements that the first is "probably" the current true figure compared with the Parry Report's recommendation of 6 per cent, and that the second would seem a reasonable target, to an outsider, the arguments will be rightly disregarded.

Perhaps the true reasons why "the least of his colleagues" have not been heeded more are those briefly touched upon in Thompson's presidential address. There is a need for a new contract between the Department of Education and Science to negotiate with the British Library to be the focus of a library cataloguing or a contract basis.

There are two major systems available now in the United Kingdom to which university libraries may belong and to put it simply, neither have their cataloguing done for them. One of them is indeed run by the British Library and now incorporates the international computer-based information systems "into which each British university library should be plugged".

The other system, a cooperative, already has several United Kingdom university library consumers participating in addition to one in Denmark and another in Europe. It is a system of "open cataloguing" which is being studied in Australia as also being studied in University

SSRC and policy

Sir—In your issue last week (*THES*, October 14) there was a piece on Social Science Research Council and Policy Studies. In this number of statements were made about SSRC and possible future developments in its plans. To the best of my knowledge there was only one statement in the article which was really true. I am of Magdalen College, Oxford.

Yours faithfully,
DENISE ROBINSON,
Oxford

Women in engineering

Sir—You keep writing about the need for more women in engineering. I am a woman student of civil engineering at Leeds University. This year, not like being considered for a job.

Yours faithfully,
TENG HANG CHOW,
LEUNG SHAW, VALERIE CHOW,
JULIE DENT, SUSAN GIBSON,
JOANNA LUMLEY, CAROL MACKMAN, ELIZABETH GUA,
ALISON BAY, JULIE REARDON,
LEUNG TEGH, ZIA TODD,
TYSON SOOK NGOH, WYNN ANGUS ZARIEL, LINDA DEBORAH BROWN,
HEON KHOO, TAI WALKY WILLIAMS,
HELEN WILLIAMS,
Department of civil engineering,
Leeds University.

King Abdul Aziz University

Jeddah-Mecca, Saudi Arabia

A special report by The Times Higher Education Supplement

University with a future

by Paul Moorman

It is hard to imagine, driving out to the collection of temporary, prefabricated buildings behind Jeddah Airport that is the main campus of King Abdul Aziz University, that one day the site will house one of the most prestigious centres of learning in the Middle East—and, it is hoped, the world.

Named after the charismatic monarch who earlier this century welded the ancient warring tribes of Arabia into today's modern nation State, the university this year celebrates its tenth anniversary. But it is only now that its expansion is really taking off.

By the year 2000 its 900 hectares of sand, with the hills of the Hejaz as a spectacular backdrop, will have been transformed into a University City with a population of more than 10,000. The cost of this prodigious programme has not been made public, but some estimates put it at over £3 billion.

Work on implementation of the Master Plan is now due to get under way. In the meantime, buildings costing up to £1m each with a planned lifespan of only a decade are still being erected. They will be pulled down when necessary to make way for the permanent structures.

With a budget for this year of £120m, the university has no money problems. As with every sector of development in Saudi Arabia, the crucial thing is not the cost but the speed with which the job can be done.

The Saudis are well aware that the oil will not last for ever. The aim is to create a modern, affluent Islamic state within 50 years which will not rely on oil for its future prosperity. In the meantime, the country is marked "top priority" and highly prized and educated population is perhaps the highest "top priority".

By 1980 a quarter of the national budget will be devoted to education. Thus it is that a new school building is completed somewhere in the country every

second day. To meet the corresponding anticipated demand for student places, Saudi Arabia's handful of institutions of higher education are being required to expand in a dramatic way.

Riyadh University, for example, the country's oldest, increased its enrolment in 1976 by 17 per cent; and the University of Petroleum and Minerals at Dhahran by 20 per cent. Enrolment on the Jeddah and Mecca campuses of King Abdul Aziz University (there is also a small college at Medina attached to KAAU as well as the famous Islamic University of Medina) rose in 1975-76 by 76 per cent.

Such expansion inevitably brings in its wake major problems. Not least of which is where to get the academic staff from. At King Abdul Aziz University only 20 per cent of academics are Saudis, and most of these are in senior positions. Much of their time is taken with administering and helping to plan the university; consequently, a great deal of the teaching is done by expatriates, mainly Egyptians and Pakistanis. Britons are the most numerous from the western world.

Nearly 10,000 students are now enrolled on the two campuses, and plans are well advanced for Mecca to become an autonomous university. When the University City is completed it is estimated that the student population will be over 18,000. But recent projections indicate that demand could far outstrip this figure.

Complicating the development of the university is the fact that all facilities have to be duplicated: male and female students are not allowed to mix. This means a separate girls' college with parallel lecture programmes.

It is planned that King Abdul Aziz University should have a strong service role in the community. Many of its facilities will be open to the people of Jeddah, quite apart from the fact that the great majority of its students will also be from the city; and thousands of the support staff who will be living in the University City will have moved there

from other parts of Jeddah and the surrounding area.

Thus it is that the health centres will be available in certain circumstances to ordinary people, and much of the medical research will be concentrated on diseases indigenous to the country. Geology and desalination research will also concentrate on areas which will be of direct use in the city.

In addition, the university will provide a variety of commercial courses for local businessmen in such things as accounting and marketing. The university will also help fill the gap in middle-level provision: a wide range of vocational courses will be laid on.

But the university will also have another special "service function" and one which is essential to an understanding of how it sees itself developing. As Sheikh Ahmad Salah Jamjoom, one of the founding fathers of the university, put it: "Knowledge must not only serve society; it must also save God". That is no empty rhetoric. Muslim scholars have, of course, long attacked the notion that knowledge, even pure science, is "objective" and "value-free". They have insisted that there can be no true knowledge without an understanding of its role in God's scheme of things.

The Muslim world in general and Saudi Arabia in particular sees the wealth generated by the oil bonanza as a chance to reverse the eclipse by the west of learning. They are convinced of the possibility of developing highly sophisticated systems of, for example, "Islamic" social science, "Islamic" economics, "Islamic" medicine and even "Islamic" mathematics.

The aim is the creation of a new Islamic Golden Age of culture and learning: Islam with a modern face. The de-westernization of knowledge is the first central task of the enterprise. King Abdul Aziz University will be expected to make a key contribution.

Contents	
Pilgrims' progress	III
Geologists' paradise	IV
Islamic economics	V
British Council project	VI
R & D centre	VI
Mecca campus	VII
Master Plan 2000	X
Preventive medicine	XI
Foreigners' Jeddah	XII
Saudi profile	XIII
Elusive books	XIV
Engineering	XIV
Information science	XV
KAAU development	XVI

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One of the university's most important centres is the Institute for Applied Geology
'From here I can see geology'

Saudi Arabia is a geologist's dream. The west of the country is dominated by the Arabian Shield, a vast pre-Cambrian shield, which makes up most of the continent of Africa and the rocks of which are between 600 million and 1,000 million years old. To the east and centre lie the younger, so-called 'crustal rocks' of the Shield: it is here that the oil and gas are to be found.



What particularly excites the 'Shield geologists' at King Abdul Aziz University is the exposure of the rocks, unobscured by vegetation. As one academic puts it: 'I can look out of my laboratory window and see geology.'
 Not only can he see geology. In contrast to some of his colleagues in other disciplines, he can actually do it, too. Expansion at the university is so rapid, change so fast and departments so embryonic that harassed administrators and deans often have little time to do more than hire the academics. When they get to Jeddah they have to fend for themselves.

The pre-Cambrian Shield is rich in minerals

While a mathematician may be told the equivalent of 'here's a room, a table and some paper; get on and do some maths', the geologist will find full programmes and, most important, trucks and equipment available for extensive field work.
 Oil is not going to last for ever. Maybe not much more than another 30 years, according to some experts. The pre-Cambrian Shield is rich in copper, zinc, iron and phosphates. Gold has also been found. Geologists know-how will be vital to the country's long-term prosperity.
 This realization is reflected in the importance attached to the subject at King Abdul Aziz. There is, of course, a university geology department for undergraduates. But the prestige institution is the post-graduate Institute for Applied Geology, the only part of the university to offer PhDs.

The institute does not pretend to compete with such activity; nor is it in the business of prospecting. But it began a major project this May aimed at charting in detail the rock types of the Shield and their mineralization.
 Water resources management is becoming a key problem in the country as the higher shelter urban and industrial development continues. In addition, a major expansion of irrigated agriculture is being planned.
 The hydrogeology specialism includes areas such as geology, groundwater geology, hydrogeology and geophysics.
 The arrival of undergraduates will complete the present stage of the institute's development. It was created in 1970 as an independent centre under the sponsorship of the Ministry of Petroleum and the Resources, the United Arab Emirates, the United Arab Emirates, and the United Arab Emirates.

Under the direction of Dr Ahmed al-Shaith, the institute has recently moved from its former home in a Jeddah mansion to a purpose-built, prefabricated premises on the main campus site. The cost of its new building was \$ million. Riyadh-ahad \$1.25 million at current exchange rates. Another building, envisaged for next year, is expected to be completed in 1978.
 Dr al-Shaith, a graduate of Cairo who has also studied in London, emphasizes the applied nature of the work the institute is doing. Its 30 researchers, he says, in no way overlap with the academics in the university's geology department.
 Significantly, the institute works in English as against Arabic in the department. English is the language of the technical sections of the Ministry of Petroleum and Mineral Resources in Riyadh. Those who finish their postgraduate course at the institute will be expected to step straight into senior civil service positions.

One says "will be expected" because, at present, as in most other parts of the campus, facilities far outstrip demand. The institute has a bare handful of students. "There are so many academics here, that we talk of a teacher/student ratio rather than a student/teacher ratio", said one of the researchers.
 Things, however, are soon to change. The 30 geologists, who include four Britons, as well as Indians, Pakistanis, Egyptians, Australians and Italians, will be joined by 50 undergraduates next year.
 Reading for a BSc, the undergraduates will already have done two years' basic science at the university and have studied English. With the institute's postgraduate facilities, the students will be able to go right up to doctorate level without having to go abroad as the vast majority now must to complete their studies.

The institution currently has three departments of work-related expertise: geology, hydrogeology and engineering geology. Petroleum geology is concentrated in the University of Petroleum and Minerals in Dhahran in the east.
 Much mapping of the Shield has been carried out over the past 10 years by such specialized agencies as the Saudi Arabian Geological Survey, the American Geological Survey and the French Bureau de Recherches Géologiques et Minières. Rifonior (part of the oil company Rio Tinto Zinc) has also done some work.

Hurdles to pilgrims' progress

The annual pilgrimage to Mecca is one of the most sacred events of Islam. It is also one of the most difficult to plan.

More than a million and a half Muslims from all parts of the world will be gathering on the inhospitable plain of Arafat outside Mecca next month. They will be performing the annual Hajj—the pilgrimage to the City of God on Earth which is one of the five pillars of Islam and which every Muslim, if he can afford it, must make at least once in a lifetime.

For four days they will be praying in Mecca and carrying out complex rituals at Arafat and the other holy areas of Muna and Muzdhalifa nearby. Hundreds of thousands will be making the (optional) short journey to Medina to the tomb of the Prophet Muhammad.

Most of the pilgrims enter Saudi Arabia by sea or air at Jeddah. Until they are ready to begin the 50-mile trek to Mecca they are housed in two gigantic "pilgrims' terminals" in the city centre. The remainder of the faithful arrive from the north via Jordan and the Medina road. At peak periods Mecca's population swells from its usual half million to nearly 2 million.

Near chaos reigns. The logistics of moving and controlling such a multitude of people would tax the resources of the most sophisticated planning systems. For the duration of the Hajj the west of Saudi Arabia simply grinds to a halt. The Red Sea roadsteads are more tightly jammed than ever; the air-

port gives up the fight and diverts the endless stream of western businessmen to Riyadh or the Gulf.

But the worries go far deeper than just making sure everyone gets to Mecca. Health problems are enormous: many of the pilgrims come from societies where hygiene is rudimentary. This year's cholera outbreak in the Middle East is an added hazard. Sanitation is primitive. Human excreta is ankle-deep in places. In addition, more than a million animals are ritually slaughtered and their entrails left in the sun.

Planes spray the pilgrims with DDT; chlorine canisters attack the human and animal waste. Thousands of the Hajj insist on taking their cars; convoys of ambulances and supply lorries ply the single highway between Jeddah and Mecca. Horns blare day and night.

The Hajj is one of the most sacred events in the Muslim calendar. It is also very big business. Despite the proliferation of plush hotels, accommodation in Mecca is like a dog's breakfast. The city is a foul-lod's paradise. Rents are sky-high; £60/£80 a night is not uncommon. Hajj organizers and guides demand—and get—handsome fees for their services. The sale of sacrificial animals brings a staggering £10m into the coffers of the region. Some pilgrims spend their life-savings on the Hajj.

Officials of the Hajj Ministry in Riyadh, which oversees the pilgrimages (every Muslim country has a Hajj Ministry), are keenly aware of the difficulties. In particular, they know that present-day conditions are not exactly ideal for the pilgrim to attain the state of *Grass* which is the whole point of the exercise.

But their hands are largely tied. Planning restrictions are virtually unknown and any attempt to curb the rights of private businessmen would be unthinkable. Nor is it possible to limit the numbers coming from abroad by a quota system: that would be seen as an unpardon-

able intrusion between man and his Maker.

It has to focus on these problems, that an independent think tank, the Hajj Research Centre, was set up at King Abdul Aziz University two years ago.

Staffed by a team of 10 researchers, only one of whom, the director, Mr Sami Angawi, is a Saudi, the centre's philosophy is that, wherever possible, small is beautiful.

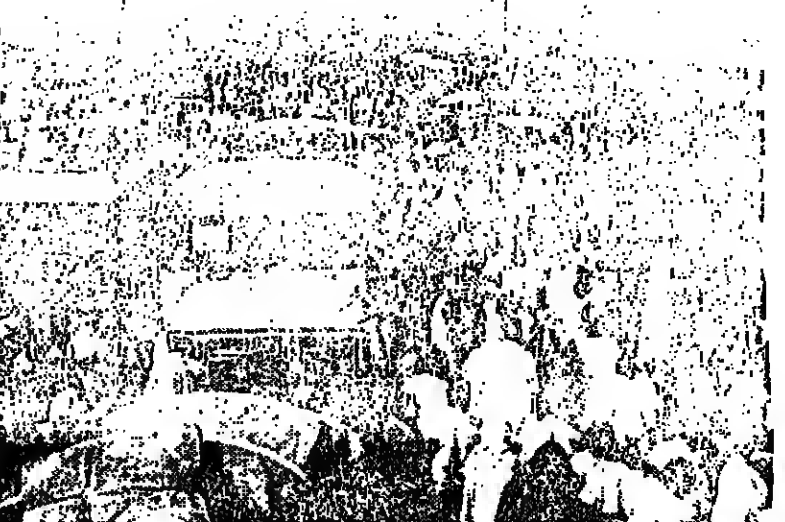
Mr Angawi feels that the way to the best articulated concern over the growing problems of the Hajj is a combination of highly specialist projects by the resident researchers and the holding of prestigious seminars to which leading experts from throughout the Muslim world are invited.

All the researchers are Muslims. They have to be because the "Muslims only" rule in Mecca and Medina is strictly enforced by police guarding the approach roads to the cities. (There is a so-called "Christian by-pass" for cars needing to take the Mecca and Medina roads for other destinations.)

Most of the researchers are now preparing the first titles in a projected series of monographs which the centre is planning. Topics include "Fundamentals of Hajj", "Environment of Hajj", "Planning in Mecca and Medina", "Statistics of Hajj" and "Special Structures of Pilgrim Accommodation in Mecca". The monographs are intended as reference books.

Another part of the centre's ambitious publishing programme envisages technical and scientific reports aimed at the decision makers and selected experts. Titles in the pipeline include "Administration and Organization of the Hajj in Asia", "Evaluation of Meat of the Ritual Sacrifice at Muna" and "Development Projects in the Holy Areas".

Three "popular" books aimed at explaining the Hajj and designed for teachers and students are being prepared: "Change and Development in Mecca", "Mecca and the



Researchers are working on the increasingly complex problems of the Hajj.

Hajj" and "The Hoj of the Prophet: an Historical and Geographical Analysis".

The first annual volume of "Hajj Studies" has just appeared. It contains papers on the work of the centre and, importantly, a record of the first Hajj seminar which was held at the university last December. The seminar is to be a regular event and central to the development of the centre's research.

Seventeen leading Muslim architects, economists and scholars attended last year. They included Hassan Tawfiq, the Egyptian architect whose most famous work is Architecture for the Poor, Sheikh Abu Bakr Stray Udqln, the former Keeper of Oriental Manuscripts at the British Museum, and Kelmeh Siddiqi, director of the London-based Muslim Institute.

Controversially, the seminar called for the ending of all demolition and construction work in Mecca, Medina and the Holy Sanctuaries and the initiation of active conservation policies. (One scheme, now shelved,

apparently proposed the building of a fly-over the Ka'ba.)

It also urged the introduction of lightweight, temporary buildings to house the pilgrims at Muna and recommended that cars should be allowed only when essential.

In the Saudi context, with the country's all-out dash for growth based on large-scale technology, the proposals for "low impact, technical solutions to the Hajj problems are unlikely immediately to meet with a sympathetic hearing from Riyadh. It is accepted that change will have to come slowly.

An integral part of the centre is its information unit, which consists of an information retrieval unit, a small, specialist library, microfilms and translation facilities. A central function of the unit, aimed at combating the university's inevitable academic and geographic isolation, is to keep the researchers supplied fast with all the learned journals they need.

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Land
Ownership of land is conditional on its use. The individual does not own the land; it is in trust from Allah. He is responsible for the use and abuse of this trust. The size of landholding is limited not by a uniform arbitrary ruling but by the extent of actual cultivation on the part of the tenant by himself and with the help of hired labour.

Property
Private property, in as far as it is permissible, is as sacred and inviolable as the life of the owner. Islam considers the abolition of private property or its quantitative limitation by fixed ceilings against human nature.

Hoarding
Islam forbids hoarding of commodities of any kind, particularly food, if the aim is the creation of artificial scarcity and rise in prices. All methods of creating artificial price increases are condemned in the severest terms. Price control by State authorities is also ruled out.

Zakah
Zakah is usually translated as "the poor tax". This is in fact wrong as Zakah is not solely for the poor, nor is it a tax; although the Islamic State collects it, it does not levy or impose it. It is a spiritual duty required of all Muslims. Payment of Zakah is a duty which is laid on all property.

Interest
Islam forbids all transactions involving interest of any kind. The Koran has laid down strict injunctions with regard to interest: "Those who swallow usury cannot rise up... Allah permits trade, forbids usury... As for him who returns (to usury) such are rightful owners of the Fire".

Establishing a new world money order

Khursid Ahmad on a research centre which will propose Muslim solutions to the world's economic difficulties

If crisis in a science means its continued inability to meet the challenges that confront it, then few would disagree that economics is in the throes of a deep crisis. The plausibility of rise of neo-economicism from the charred debris of the crash of the 1930s generated a new confidence among economists. Solutions to almost every problem seemed within sight. All looked green in the valley of economics. The confidence was short-lived. Not only did the old problems remain unsolved, new ones emerged with threatening overtones; mass poverty frustrated take-offs in development; increasing disparities at regional, national and international levels; coexistence of hunger and affluence; irrational use of non-renewable resources; incompatibility between technology and developmental needs; unsustainability of production and consumption processes to environmental needs; exploitation of the poor and the weak by the rich and powerful; inflation and stagflation; structural deformities in relations between developed and developing countries.

All these and many more problems have failed to be tackled within the framework developed by just-Keynesian economics. This is being realized even by those economists who had earlier thought that their sophisticated economic models would be able to deliver the goods.

The predicament of economics has been thoroughly examined in a new book, *Economics in the Future: Towards a New Paradigm* (editor Kurt Dupper; contributors: Jan Tinbergen, Harvey Leibenstein, Sir Roy Harrod, Gunnar Myrdal, William Kapp and Shigeto Tsuru, London: Macmillan, 1976).

The near-consensus that emerges is that what is needed to salvage the duck of economics, to use Veblen's analogy, from the "sawed wheels" in which it is stuck at the bottom of a rubbish-heap, is not just some new interpretation of this or that economic theory or some changes within the current paradigm of economics, but a new paradigm under which economic

problems can be approached not as economic problems in isolation but in the context of an entire social system.

This argument constitutes a point of departure for the Muslim economist. Islam is not a religion in the limited sense of the word, interested only in man's salvation in the life to come. Human life is looked upon as an organic whole and its problems are approached not in a mechanistic way, but in the light of the moral values and social ideals which Islam expounds. The purely positivistic vision of the social sciences developed in the West becomes obsolete in this new context. Man is treated as the possessor of a moral personality, not just a complex of molecules.

Outside the Muslim world the social sciences have followed almost unreservedly the model of the natural sciences with the result that technological solutions are being imposed in the name of science. Muslim economists believe that reconstruction of the entire framework for economic analysis and policy is needed to the service of humanity. During the last 50 years over 500 books and articles have been written by Muslim economists articulating different aspects of the new paradigm they want to develop.

In February 1975 the First International Conference on Islamic Economics was held in Mecca under the chairmanship of Dr Muhammad Omar Zubeir, the leading Arab economist who is President of King Abdul Aziz University. The conference was attended by 200 leading Muslim economists from all over the world.

Thirty-five papers were presented on such subjects as the nature of Islamic economics; problems of pricing; consumption, distribution and growth in an Islamic economy; the establishment of an interest-free economy; and the development of economic cooperation among Muslim countries.

The conference resolved that an International Centre for Research on Islamic Economics should be established to continue its work. King Abdul Aziz University accepted the proposal and has now established the centre under the chairmanship of Dr Hasan Bokkai. Another leading Muslim economist, Dr Ains Zarga, is to help the centre in its initial phase. Dr Mubommed Sauri from France, and Dr Umar Chugra, from Pakistan, are among others acting as advisers. Dr Zubeir remains the moving spirit behind the entire scheme.

The main objectives of the centre are:

- To initiate, sponsor and coordinate research on different aspects of Islamic economics. This includes the development of a more rigorous Islamic critique of contemporary economic theory and policy, an evaluation of the present world economic situation and reconstruction of economic theory and socio-economic policies in the light of the values and principles of Islam.
 - To build a data-bank for the Muslim countries and sponsor research on the prospects of economic cooperation between them.
 - To produce text books and other educational media on Islamic economics and promote the teaching of Islamic economics at different levels of education over the Muslim world.
 - To sponsor doctoral and post-doctoral research on Islamic economics in different academic centres of the world.
 - To establish a library and documentation centre on Islamic economics and make arrangements to share these facilities with scholars interested in Islamic economics all over the world.
 - The centre plans to hold an International Seminar on Monetary and Fiscal Economics of Islam in April, 1978. Twenty scholars will present papers to this seminar. The themes have been published in *Monetary and Fiscal Economics of Islam: An Outline of Some Major Subjects for Research*, produced jointly by King Abdul Aziz University and the Islamic Foundation, Leicester.
 - The long-term aim of the centre is the formulation of an economic model which will rely neither on exploitative capitalism nor inhuman socialism.
- Professor Khursid Ahmad is director of the Islamic Foundation, Leicester, and an honorary consultant to King Abdul Aziz University.

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The British Council has been helping medical and engineering students learn English

£1m package eases changeover to English medium studies

to the rush to develop the university, improvisation is all. Practically everything—from academics' accommodation to lecture halls to student restaurants to administrative offices—is temporary. Many of the new buildings, replacing old temporary ones, are also temporary. Thus it is that the British Council's major university project has been stood, until very recently in a converted lemming factory off the Mecca Road.

A common problem facing universities in many developing countries is that secondary school students are taught in the native tongue and then have to switch to English—especially if they are studying science subjects—when they go to university.

Early in 1975 the embryonic medical and engineering faculties at King Abdul Aziz approached the Council and asked it to provide specialised English language courses for its incoming students.

This was not the first such contact between the university and the Council. It helped recruit a large number of lecturers in 1971 to service the English-language orientation year which all students had to go through at that time.

Although successful, the scheme was short-lived. The drive for Arabisation made the year politically unattractive in the university authorities. At the same time the country's religious leaders were concerned that English-medium teaching would undermine the university's Islamic base. They pointed to the American University of Beirut in the Lebanon and the Middle East Technical University

in Turkey, both of which have orientation years and teaching in English, as examples of never-Westernisation. The year was wound up in 1972.

As a result of the 1975 approach, the Council drew up a £1m Communication Skills in English package to supply equipment (both hard and soft), teachers, administrators and consultants from Britain. The package was accepted and the programme got under way in September, 1975, with just over 300 medical and engineering students.

More than 40 Council people were involved in the project: English for Special Purposes material was produced and television and sound engineers installed for monitoring the video and language laboratory work.

For 1976-77 the contract—again a turn-key operation with the Council buying on the facilities in return for a fee—was renegotiated. Its value went up to £1.3m and the number of students to 700. With the medical and engineering faculties still taking the cream of the applicants, the project prospered academically.

So much so, in fact, that the university has now decided to take it over from the Council. And that, according to Mr Richard Jarvis, the Council Man in Jeddah, is the way it should be. "It is quite right for the university not to want the Council to become a parasite," he says.

From this year, therefore, the Council involvement will begin to be phased out. The contract for 1977-78 envisages the continuation of a council office as the project director, with the Council carrying on providing consultancy services and recruiting staff. The staff, however, will now be an university, rather than Council, contracts.

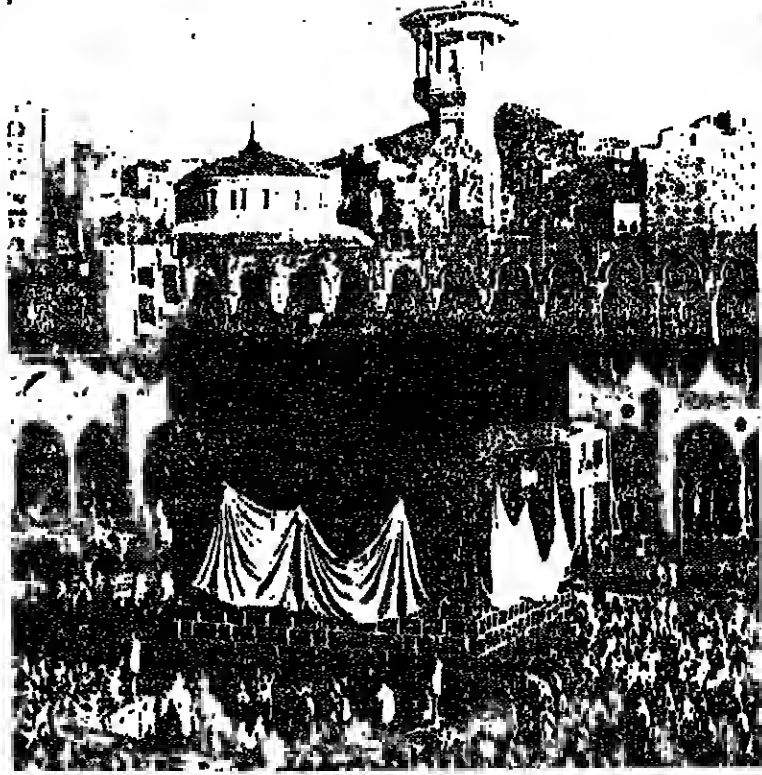
On top of this, the project has now left the lemming factory for purpose-built premises on the university campus. It is planned that the new building should become the nucleus of the university's new language centre.

Already the two-year courses have been expanded to take in nursing, meteorology and applied geology students, all of whom need English for their work. With nearly 1,100 students projected for this year, the centre will be one of the most flourishing on the campus.

Mr Jarvis feels that the university may want to go it completely alone by the next academic year, although the emphasis will be on an orderly and gradual retreat. The Council will stay with the project as long as its expertise is needed.

Mecca: physical and spiritual heart of Islamic learning

Ziauddin Sardar on the special significance of the Mecca campus of King Abdul Aziz University



The Ka'ba in the Sacred Mosque

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Building a university in such an environment is no easy task. It must encompass all that is dear to the city: its tradition of learning, respect for men, nature and the environment, devotion to prayer and peace.

The Mecca campus of King Abdul Aziz University takes its inspiration from such surroundings. Situated a few kilometres from the Sacred Mosque off the Muwa Road, the scholarship that survives there is respect for the ancient Muslim tradition of dispassionate and lengthy examination before final assessment. It avoids elevating the malicious debunking of established authorities to the level of originality; it does not mistake ostentation for intellectual quality. Its foundations are the Koran.

The Mecca campus was established in 1949 by the late King Abdul Aziz, the founder of the nation, as the College of Sharia (Islamic Law and Jurisprudence) for the training of judges and preachers. The college was modelled like the entire educational structure in Saudi Arabia, on the Egyptian system. It was to follow, in its approach to the study of Islam, the traditions of such well-known institutions of Islamic learning as al-Azhar University in Cairo, the oldest university in the world; the Qurtayyin University in Fez, Morocco; and al-Zaytoonah College in Tunis.

Scholars from all over the world were invited to join the college. The response was predictable. The Sacred Mosque has always been a centre of religious education commanding much prestige throughout the Muslim world.

Most of the teachers came from Egypt, with some from Syria and other Arab Muslim countries. These countries still today provide most of the academic staff.

In 1965 the curriculum of the college was broadened to encompass the wider field of Islamic studies and was subsequently renamed the College of Sharia and Islamic Studies. In 1971 the college was incorporated into King Abdul Aziz University. The move gave a further impetus to the rapid growth of the college.

Its basic aim, however, remained the same: to be a centre for the training of teachers and preachers of Islam, to pursue research into the various areas of Islamic studies and to contribute to the enrichment of Islamic culture.

The College of Sharia thus became the basis of the Mecca campus of the university. Today, besides the faculty of Sharia and Islamic studies, the campus also contains

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The Research and Development Centre at King Abdul Aziz University was born out of this realization. It emphasizes that the country's development plan cannot overlook the importance of establishing flexible institutional mechanisms that provide R & D support for local industry and for orienting and motivating local scientists and engineers to the jobs where they are most urgently needed.

In its drive for rapid development, Saudi Arabian industry is encouraged to adopt innovative and creative thinking. The R & D Centre has responded to this challenge by establishing a Research Unit, a Management Training Unit and a Central Service Unit.

The activities of the Research Unit are focused on the study of Islamic economies with the aim of organizing the life of the individual and the society on the basis of Islamic Law. The unit gives advice on how to establish Islamic banks and to train their managers and staff. It also provides a number of studies based on the Islamic Development Bank for Development in Islamic Countries and the Islamic Development Bank.

The Management Training Unit seeks to establish a research and training programme for developing entrepreneurs and administrative personnel interested in developing their particular fields of specialization. Programmes for training in fields such as banking, insurance, construction and food processing have been in great demand.

The Central Service Unit provides R & D backing for local businessmen. An Accounting and Industrial Psychology Laboratory has been set up to show firms the best to determine workers' productivity. These and other specialised studies of the kind are published in quarterly journals and reports. Research results are disseminated through seminars, symposia, reports and proposals.

Paul Morison

Mecca: physical and spiritual heart of Islamic learning

Ziauddin Sardar on the special significance of the Mecca campus of King Abdul Aziz University

Mecca is not just a geographical location. It is the focal point of every Muslim. A sanctuary: the past, the present and the future of the Muslim community.

At its centre is al-Masjid al-Haram, the Sacred Mosque. You walk in from any one of its many gates to come face to face with the Ka'ba, the symbol of the unchangeable values of Islam.

Building a university in such an environment is no easy task. It must encompass all that is dear to the city: its tradition of learning, respect for men, nature and the environment, devotion to prayer and peace.

The Mecca campus of King Abdul Aziz University takes its inspiration from such surroundings. Situated a few kilometres from the Sacred Mosque off the Muwa Road, the scholarship that survives there is respect for the ancient Muslim tradition of dispassionate and lengthy examination before final assessment. It avoids elevating the malicious debunking of established authorities to the level of originality; it does not mistake ostentation for intellectual quality. Its foundations are the Koran.

The Mecca campus was established in 1949 by the late King Abdul Aziz, the founder of the nation, as the College of Sharia (Islamic Law and Jurisprudence) for the training of judges and preachers. The college was modelled like the entire educational structure in Saudi Arabia, on the Egyptian system. It was to follow, in its approach to the study of Islam, the traditions of such well-known institutions of Islamic learning as al-Azhar University in Cairo, the oldest university in the world; the Qurtayyin University in Fez, Morocco; and al-Zaytoonah College in Tunis.

Scholars from all over the world were invited to join the college. The response was predictable. The Sacred Mosque has always been a centre of religious education commanding much prestige throughout the Muslim world.

Most of the teachers came from Egypt, with some from Syria and other Arab Muslim countries. These countries still today provide most of the academic staff.

In 1965 the curriculum of the college was broadened to encompass the wider field of Islamic studies and was subsequently renamed the College of Sharia and Islamic Studies. In 1971 the college was incorporated into King Abdul Aziz University. The move gave a further impetus to the rapid growth of the college.

Its basic aim, however, remained the same: to be a centre for the training of teachers and preachers of Islam, to pursue research into the various areas of Islamic studies and to contribute to the enrichment of Islamic culture.

The College of Sharia thus became the basis of the Mecca campus of the university. Today, besides the faculty of Sharia and Islamic studies, the campus also contains

King Abdul Aziz University: Academic Programme 1977/78 Jeddah/Mecca

The academic year is arranged on the semester basis; the degree programmes are organized on credit systems.

GRADUATE AWARDS

MECCA CAMPUS

Faculty of Shariah and Islamic Studies
Four year full-time course leading to B.A. degrees in:
Shariah, Arabic Language and Literature, History and Civilization of Islam.

Faculty of Education
Four year full-time course leading to a B.Ed. degree with specializations in:
Geography, Psychology, Physics and Mathematics, Chemistry and Biology.

JEDDAH CAMPUS

Faculty of Economics and Administration
Four year full-time course leading to B.A.(Econ.) Degree with specializations in:
Economics, Public Administration, Business Administration, Accountancy.

Faculty of Science
Four year full-time course leading to B.Sc. degrees in:
Physics, Chemistry, Biology, Geology, Mathematics, Oceanography.

Faculty of Arts and Humanities
Four year full-time course leading to B.A. degree in:
English Language and Literature, History, Geography, Library Science, Mass Communication.

Faculty of Engineering
Four year full-time course leading to B.Sc. Degree in:
Civil Engineering, Electrical Engineering, Industrial Engineering, Mechanical Engineering, Mining Engineering, Nuclear Engineering, Architecture, Landscape Architecture, Urban Planning.

POSTGRADUATE AWARDS

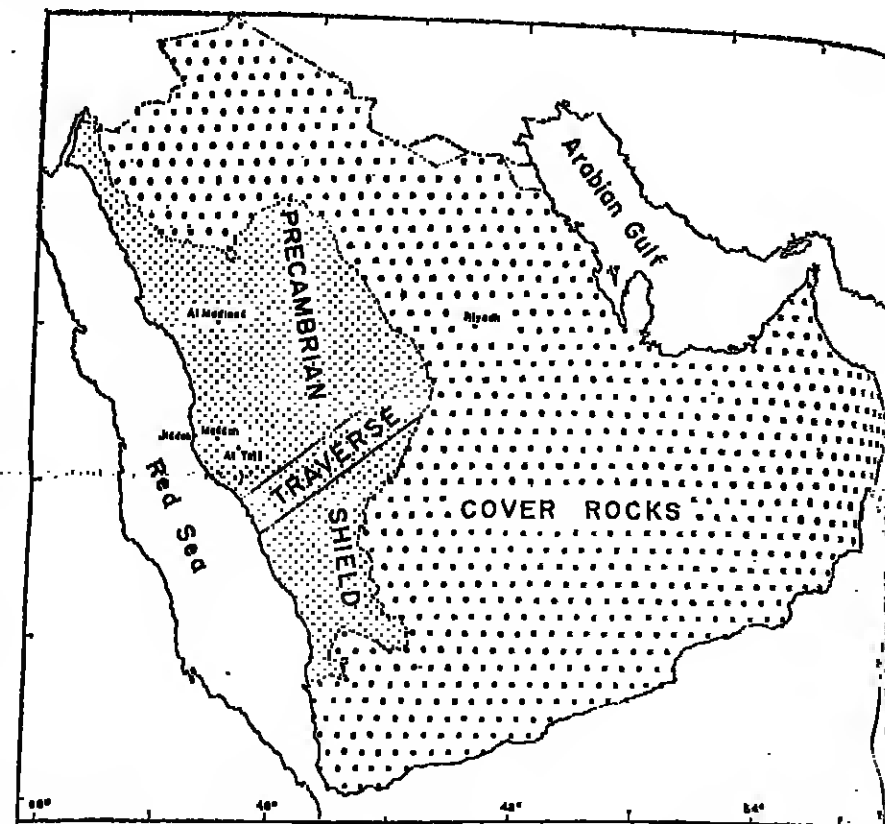
Faculty of Medicine and Allied Sciences
Six year full-time course leading to:
M.B. B.Ch. Degree.
Short courses leading in:
Higher Diploma in Nursing.

Faculty of Medicine and Allied Sciences
One semester refresher courses in:
Anatomy, Physiology, Microbiology, Clinical Pathology, Hematology, Morbid Anatomy.
Centre for Applied Geology
Two year full-time course leading to M.Sc. Degree in:
Mineral Exploration, Hydrogeology, Engineering Geology.

Two year Diploma course leading to the professional qualification of:
Geology Technician/M.Sc. students may pursue full-time research in their area of specialization leading to a Ph.D.

Faculty of Shariah and Islamic Studies
Department of Higher Studies
Three year full-time course leading to M.A. Degree by examination and thesis in:
Shariah, Arabic Language and Literature, Islamic Civilization/M.Sc. students may pursue full-time research leading to a Ph.D.

KING ABDUL AZIZ UNIVERSITY
PO BOX 1540
KINGDOM OF SAUDI ARABIA



DISTRIBUTION OF PRECAMBRIAN SHIELD AND COVER ROCKS
SAUDI ARABIAN PENINSULA

A Research Project by the Petrology Department of the Institute of Applied Geology by M. J. Roobol

The geology of Saudi Arabia can be divided into two main groups of rocks. In the west a Pro-Cambrian shield of at least 1,050 to 600 million years old is well exposed in the desert, while the rest and east of the country comprise the "cover rocks" which overlie the Precambrian Shield and are younger than 600 million years.

The appearance and geological problems of these two areas of rocks are very different. The cover rocks are sedimentary and it is within them that the oil and gas occur. In contrast the Precambrian shield consists largely of igneous rocks, about two thirds of plutonic rocks (granite, granodiorite, diorite, gabbro), and one third of volcanic and sedimentary rocks. The shield rocks have been involved in several orogenic episodes and most of them show some degree of metamorphism. High grade metamorphic rocks are not uncommon. Mineral exploration within the shield rocks is concerned with the search for copper, gold, silver, lead and zinc.

The Pro-Cambrian shield of Saudi Arabia is a continuation of the Precambrian shield which forms most of the continent of Africa and because of the better exposure and access (lack of vegetation and political unrest) it is expected that in the future much information on the origin and metallogenesis of this vast Pro-Cambrian shield will be forthcoming from Saudi Arabia. Over the past decade much systematic mapping of the Pro-Cambrian shield of Saudi Arabia has been carried out on a basis of quadrangles measuring 1° latitude by 1° longitude by the United States Geological Survey, the French Bureau de Recherches Géologiques et Minières and the Saudi Arabian Directorate General of Mineral Resources, all based in Jeddah.

A project was commenced in May, 1977, by the staff of the Petrology Department, Institute of Applied Geology, which is the study of a strip across the Pro-Cambrian Shield between latitudes 19° and 24° north (Fig. 1 marked "T") and the aim of the study is to define systematically and uniformly the rock types of the shield and their mineralization.

The first stage of this work which was completed in July, 1977, involved the area measuring 600 by 150 km or about 90,000 km². This area comprises 31 quadrangles all of which are covered by the 1:100,000 black and white air photomicro-satellite survey maps carried out at intervals of 20 grommes. The latter were mainly used for extra-

polation of surface geology and geological boundaries below the thin cover of the peninsular surface. For 10 of the quadrangles B.R.G.M. 1:100,000 geological maps and reports are available while for another nine, similar reports by the U.S.G.S. are available for the remaining 12 quadrangles of the U.S.G.S. 1:500,000 maps are available.

Because of the varied geological coverage of the section, the topography was to compile all existing maps and the magnetic data and air photo interpretation to extrapolate into the least known areas. The second stage was to traverse the area to identify and gather a preliminary collection of samples (as these are Precambrian rocks and lack fossils and lithostratigraphic grouping can be used).

The preliminary field traverses were carried out in three parts using the available field facilities of the Institute of Applied Geology available to the post-graduate students. One water tanker, one long wheel base water truck and two Toyota Landcruisers were used as well as a public cook and kitchen. One thousand reference rock samples were collected. Based on this material a control which produced a "preliminary geological strip map" was prepared. This is a provisional strip map which is intended which will be available at the international geological meeting of the Pro-Cambrian Arabian-Nubian Shields to be held at the University of Edinburgh in 1978.

The main results at this stage are summarized in the map which can be regarded as a series of distinct north-south trending lithologic types and belts of contrasting rock types and metamorphic facies. For example, narrow belts of granite and complex belts of diorite plutons, belts of gabbro plutons—these features are similar in those of the South American Andean orogenic belt metamorphic rocks. Belts of higher grade metamorphic rocks such as amphibolites contrast with belts of lower grade rocks where the amphibolite schists or belts where the amphibolite schists are barely metamorphosed. Narrow belts of ultrabasic rocks are also present.

This is the first stage of this work. The next stage will include the geology of the complex collected. Further traverses must be made in the field to strengthen the least known areas. Finally the chemical characteristics of the various belts of rocks will be determined. With the exception of radiometric dating, this work was carried out at King Abdul Aziz University.

Humanistic—social sciences at King Abdul Aziz University

by Waqar Hussain

The single most important characteristic common to all Muslim technical education systems, unaltered, more or less by concessions to Islamic cultural influences and sensitivities, is their domination by either the Western or the Marxist world-views. One such concession is to misrepresent our education systems to ourselves as being purely rational and independent of any ideology. We do this also, perhaps, for pragmatic reasons. The dominant model of these systems comprises three parts of the curricula structure.

Technical disciplines are taught in the unwelcomed "Muslim countries" in a purely rational context devoid of all values and ideological interpretations of cosmology. Furthermore, since the books, the non-Muslim instructors, and the Muslim instructors who are themselves unconscious students and practitioners of the Western or Marxist educational systems, are all products of non-Islamic origins, even these rational sciences and technology embody the Western or Marxist cosmological doctrines. In the teaching of these subjects the available Western or the Marxist literature, deceptively called "modern" and "socialistic" respectively, is used. The plagiarized versions in Western or local languages, if at all they exist, might be qualitatively inferior but in ideas and content they are mostly the product of uncritical and blind imitation. In this category belong the works on industrial management, engineering economics, industrial psychology, economics of public works planning, etc.

Even in the avowedly Muslim countries, the social sciences are taught in the Western or Marxist ideological perspectives, and the Humanities are taught from the Muslim perspectives. The Islamic humanistic sciences may or may not be a required or compulsory part of technical education curricula.

Even in universities in which Islamic humanistic-social science studies are a part of the technical education curricula, there may rarely be any relevance in these courses to problems at their interface with science, technology, industrialization, and socio-economic development.

They are taught by graduates of the traditional colleges of Islamic studies in the Muslim or Western countries. They are mostly traditional humanistic courses in Muslim history, theology, beliefs and practices, exegesis and dialectics, apologetics and polemics, Muslim historical thought, etc.

Most often the technical education curricula of the secularizing Muslim countries include neither the Islamic nor the non-Islamic humanistic-social sciences. This is partly due to the misconceptions among Muslim technical educationists and professors concerning the "positive role" and "necessity" of humanistic-social science studies in technical education and technological development. Humanities and social sciences are considered a waste of time, of low priority, or irrelevant for education in science and technology. These misconceptions are common among the secular and modernist Muslims as well as among practising Muslims.

A second reason is that these Muslim technical educationists and professors are products of the colonial education system whose aim was to produce narrow technical specialists incapable of social understanding, involvement and development.

Third, these "educationists" and professionals are most often utterly ignorant of the history, philosophy and methodology of Islamic technical education as well as that of the contemporary industrialized countries where they themselves obtained higher education in narrow technical specializations.

Unesco activities and publications concerning humanistic-social sciences studies in technical education.

Fourth, and perhaps the most significant reason for lack of awareness or interest among Muslims for humanistic-social sciences studies in technical education, is the dearth or non-existence of any relevant and meaningful Islamic literature in humanities and social sciences. We also lack instructors who are qualified or at least willing to take up this intellectual challenge.

A Plan of Action

The task of integration of Islamic ideology with humanities and social sciences is basically the responsibility of the specialists in these disciplines—law, political science, economics, sociology, etc. This cannot and should not be done by Muslim generalists, activists and public leaders.

But who are these "specialists"? We are aware of the ignorance or insufficient knowledge of Islamic ideology among professors of our secularized faculties of the humanities and arts. Similarly, our professors of Shariah faculties and the traditional "scholars of Islam" (ulama al-din) are either ignorant or have insufficient knowledge of the (secularized, Westernized or Marxist) social sciences and humanities.

If they have humility, faith, will and ability, both these groups of "half-scholars" can perform the great responsibility of developing Islamic humanities and social sciences.

One institutional arrangement that should be attempted is in which the separate faculty of humanities and arts, and the faculty (or department) of Shariah and Islamic studies. They should be merged into one faculty with various departments on the basis of the specialization or interest of a particular faculty member in a particular discipline.

The "re-training" of our "half-scholars" in the areas of their relative ignorance or insufficient knowledge should be undertaken by various methods such as self-learning and research during a period of sabbatical leave, formal education through a second Master's degree or a second doctorate, rubbing shoulders in humility with colleagues in the "merged" departments, etc. The Islamic generalists, scholar-activists, etc., should be invited to universities as visiting professors as well as part-time or full-time students.

The body of knowledge developed in this way will serve the needs of technical education by providing relevant textbooks and monographs for courses serving the "humanistic function". They also provide the foundation for courses serving the other functions of humanistic-social sciences curricula in technical education.

A related task is the integration of Islamic humanistic-social sciences with science and technology. The faculties and departments of science-technology specializations (for example, physics, biology, agriculture, medicine, engineering) should develop a body of knowledge and specialization in the Islamic history, philosophy and sociology of these science-technology specializations as well as of science and technology in general. A course in the Islamic (and comparative) history and philosophy of mathematics should be a requirement for students specializing in mathematics, for example. Such courses would serve the "social responsibility" function of technical education.

Another important task is the integration of Islamic ideology with technical-humanistic and techno-social science disciplines, or multi-disciplines. This can be done by teams, collaborating in teaching, as well as research and publications, comprising faculty and non-academic people who are specialists in technical subjects and the Islamic humanities and social sciences. This body of knowledge and expertise will serve the "integrative and participative" function of technical education.

The responsibility for implementing this general plan of action falls on many shoulders. The institutional structure can be of various types and these institutions can be created and supported by various means, individuals in the community or university faculty in their spare time, faculty members released from their teaching and administrative duties for part-time or full-time research, and students pursuing higher studies, in the Muslim-majority as well as the Muslim-minority countries, should all perform this social obligation (*farid kifayah*).

A special responsibility rests on the universities and governments of Muslim-majority countries, and their Islamic-conscious elites and community, Islamic research institutes, Islamic conferences, ministries of religious affairs, construction of large mosques and monuments, and so on, should be vehicles for developing an Islamic humanistic-social science disciplines. While it is proper to aim at a "big push" to achieve this goal, the Islamic strategies of gradualism (*mdiri*) and easy small compromising steps (*taybir*) might be preferable in most circumstances.

Each department of a faculty or college in the universities might create one or more positions for "research professors" in an Islamic humanistic-social sciences specialty. Research and publication are better fostered when there are opportunities to teach and use their output.

Islamic Humanistic Social Sciences at King Abdul Aziz University

The King Abdul Aziz University follows the semester and semester credit hours systems. All the faculties require 122-136 semester credit hours (about four years or eight semesters) for a bachelor's degree except the faculties of medicine and engineering. The latter requires a minimum of 145 credit hours in a five-year programme. The major activity during the first year is an intensive English language studies programme equivalent to about 24 credit hours which are not included in the 145 credit hours required for graduation.

All the students of the university, regardless of their faculty, must meet the "university requirements". These are the following six courses in Islamic humanistic-social sciences and linguistics:

Islamic Culture 101	2 Credit hours
Islamic Culture 201	2 Credit hours
Islamic Culture 301	2 Credit hours
Islamic Culture 401	2 Credit hours
Arabic Literature	3 Credit hours
English Language	3 Credit hours
Total	14 Credit hours

All the students of the College of Engineering, regardless of their specialization, must study the following four courses to satisfy the "college requirements" for graduation:

Introduction to Engineering	2 credit hours
Economics	2 credit hours
Environment and Development	2 credit hours
Management and Decision-Making	2 credit hours
Total	8 credit hours

The above college requirements were approved by the Faculty Council of the College of Engineering after turning down an earlier proposal for six courses (16 credit hours) on grounds that such a heavy proportion of curricula allocated to humanistic-social sciences will reduce the science-technology component. Thus the present total humanistic-social sciences component (excluding linguistics) is about 11 per cent of the 145 credit hours required for graduation as against the originally proposed about 17 per cent.

The "Islamic Culture" courses are designed and taught by the Faculty of Shariah and Islamic Studies, and the "College Requirement" courses by the College of Engineering.

A brief description of the courses on Islamic Culture is given below:

Islamic Culture 101:
The general concepts of Islamic faith and culture (universe and nature in Islam, etc.); prophethood; revelation; concept of worship and implication; personal and social ethics.

Islamic Culture 201:
The Quran (its revelation, readings, criticisms of unbelievers, style and exegesis); the Sunnah; *Ummah* and *Jihad* and their applications in problems of dogma, jurisprudence, politics, economics, etc.

Islamic Culture 301:
Islamic systems of family, economics, politics and criminal law or punishment.

Islamic Culture 401:
Introduction to contemporary societies; the model Islamic society in Prophet's time and its characteristics; later Muslim deviations with examples; consequences of deviations from Islam for Muslim decline in education, economy, politics, military power, etc. and on Muslim minorities. Contemporary Muslim society, its ideological crisis; modern Islamic revivalist movements; and strategies and solutions for Muslim revival and development.

The original proposal for a six-course, "College Requirements" programme had included a course in "History and Sociology of Islamic Science and Learning". The College of Engineering Council formed Committee to propose to the Faculty of Shariah and Islamic Studies the possibility of incorporating this course in its content in the series of courses on Islamic Culture by compressing, for example, the first two into one. These consultations have not yet begun.

The four "College Requirements" courses are designed to satisfy the "Instrumental" and "Social Responsibility" functions. The "Management and Decision-Making" course is to be offered by the Program (Department) in Industrial Engineering, and the other three by the Section of Humanistic-Social Science Studies in engineering within the College of Engineering. The content of their courses will follow the usual international standards.

However, the Islamic humanistic-social sciences will be thoroughly integrated with their technical content. The courses on economic or welfare economics, positive economics, and will use mathematics and show engineering applications.

The faculty teaching these courses will be recruited with these goals in mind. They will be expected to produce, with the help of whatever expertise necessary, textbooks in simple English at the end of the first year of their teaching which is the next academic year. When these goals materialize we will have the first textbooks of this kind.

A committee consisting of Islamic-oriented faculty members from within the College of Engineering, the Faculty of Shariah and Islamic Studies, and the Faculty of Economics and Administration (and may be other faculties) is to be formed to assist the Section of Humanistic-Social Science Studies in Engineering.

The section will offer courses, and also monitor courses offered by any Department or Program in the College of Engineering which have a humanistic-social sciences component in part or wholly. The aim of this monitoring is to integrate Islamic ideology in technical, interdisciplinary (e.g. techno-social science courses), and predominantly humanistic-social sciences courses. The section will also be responsible or assist in recruiting faculty to teach and conduct research and it will publish teaching material for such courses. It is to be understood that this is a new and challenging situation and as such these ideas and suggestions will be modified in the light of experience and better advice.

MUSLIM STUDIES FROM CROOM HELM

Science, technology and development in the Muslim world
Ziauddin Sardar, the Muslim Institute, London, and Hajj Research Centre, King Abdul Aziz University, Jeddah, Saudi Arabia.
This book examines how the Muslim world has and should respond to the particular problems of science, technology and development. It argues for cultural independence and self-determination but shows how the Muslim and Occidental worlds can collaborate productively in many spheres. £7.95.
Published for the Muslim Institute, London.

The reformers of Egypt
M. A. Zaki Badawi
This penetrating study examines the impact on Islamic thought of the three nineteenth century Egyptian reformist thinkers Jamal al-Din al-Afghani, Muhammad 'Abduh and Rashid Ridha. £6.95.
Published for the Muslim Institute, London.

The spatial structure of pilgrim housing in Mecca
Ghazi Abdul Wahed Makky, Hajj Research Centre, King Abdul Aziz University, Jeddah, Saudi Arabia.
The number of pilgrims making the pilgrimage to Mecca (the Hajj) in recent years has risen enormously, imposing serious strains on housing in the city. This study, based on an extensive survey of pilgrims' needs and experiences, provides a detailed description of the spatial structure of pilgrim housing and recommends improvements. £10.00.
Published in association with the Hajj Research Centre, King Abdul Aziz University, Jeddah.

Hajj studies—volume I
Edited by Ziauddin Sardar and M. A. Zaki Badawi.
This collection of essays looks at some of the most important issues involved in planning and organising of the Hajj. £7.95.
Published in association with the Hajj Research Centre, King Abdul Aziz University, Jeddah.

CROOM HELM
2-10 St Johns Road London SW11
01-228 9343

Towards the year 2000

The overall Master Plan for the Jeddah campus envisages a University City with a population of over 40,000

The long-term planning and design of King Abdul Aziz University has for the past five years occupied a large, multi-disciplinary team, including planners, urban designers, architects, engineers, landscape architects and educational planners as well as international experts in academic and technical fields.

A 100-strong team is engaged full-time in the United Kingdom, North America and Saudi Arabia in the planning and design of the university city, which will be one of the world's major construction projects. The team will grow to over 300 as detailed design of buildings reaches full momentum within the next year.

During the planning period the size of the university has had to be increased several times, partly due to the re-organising and expanding secondary education in the country which will be leading to greatly increased demand for higher education.

Underlying all thinking, however, was the desire of the university leaders to spare no effort to create a lasting symbol and visual expression of its purpose which the Islamic world could look to with pride.

While the long-range plans were under preparation the demands on existing facilities were growing at an alarming rate. To permit the proper long-term development of the Jeddah site, a temporary campus, using prefabricated buildings, has been designed and erected, but carefully integrated with the long-range plan.

During the past year, about 100,000 square metres of new temporary floor space has been added, complete with mosque, a 250-bed hospital, classrooms and staff housing. These facilities stand on the site of future institutions and housing planned for later expansion stages.

The long-term planning of the university began in 1972 when Project Planning Associates of Toronto, a Canadian multi-disciplinary consulting firm, was retained to prepare a Comprehensive Campus Development Plan. Site investigation and First Stage Component (Buildings and Engineering) for the new campus. The first stage was then to develop and agree upon a complete educational programme from which space requirements could be derived.

The preliminary Master Plan was submitted to the university in July, 1974, and was reviewed with the help of a panel of university ex-

perts. During the review period the site was expanded to accommodate more housing for the university staff. Around the same time the Master Plan for the city of Jeddah, indicating proposed long-term relationships between the university site and the future city growth pattern, was presented by a firm of British consultants.

The university called on the consultants to prepare five different schematic approaches to the design of the men's campus, all to be based on the principles established in the preliminary Master Plan, and two approaches in the design of student and faculty housing.

Schematics one to five were submitted in January 1975, together with the Master Plan report. It was the original intention that one of the schematics would form the basis of detailed design of buildings. However, studies had indicated that the university had again to expand and consequently the site had also to be enlarged. The university then requested a sixth schematic, incorporating both the expanded space requirements and various elements of the previous five schematics.

In December, 1975, the proposed schematic six plans and new Master Plan were completed. Alternative solutions regarding key elements of the plan were explored, including a re-orientation of the teaching hospital, the complete digitisation of the central spine of the men's campus towards Mecca, rearrangement of the entrance plaza and a new road layout. Plan revisions were begun and site boundaries were again modified when it became clear that certain land to the north could not be obtained but that land in the present airport zone to the west would become available.

In March, 1976, the comprehensive Master Plan for the university and schematic six for the men's campus were presented in Jeddah and approved by the university. The presentation included a huge model of the projected University City on a site covering over 900 hectares, of which 680 would be developed by the university. Design of buildings and engineering for the first stage of the men's campus then started. At the same time a Master Plan for the health services centre, which would be integrated with the comprehensive Master Plan, was under preparation by an American consulting firm under a separate contract.

The site of the university is on flat, sandy desert terrain, almost devoid of vegetation. It is located at the edge of the coastal plain, with a backdrop of rugged hills to the east. Together with the climate, which is extremely hot and humid in the summer months and brings some special problems such as blowing sand, it provides major constraints upon the design.

The Master Plan for the University City delineates the likely development over the next 15 to 20 years. The area covered by the plan is a complete sector of the city of Jeddah defined by major roads and bounded in the east by the Jeddah bypass. It will be a city within the city, with mosques, shops, schools, parks, fire stations, its own sewage treatment plant and a central air-conditioning supply.

The aim of the plan is the creation of a self-contained community to serve the university but with strong physical links to the city by the continuation westwards of the open space spine which forms the main axis of the university. Cultural

links will be reinforced through facilities, such as the public University Place, the main entrance area. The entire University City road and pedestrian network has its axis to east orientation directly towards Mecca, with the main spine through the men's campus and the health sciences centre aligned precisely on the Holy Ka'ba.

The potential resident population of the University City when fully developed is 41,000 with a daily commuting population estimated at 25,000. About 15,000 of this population will be the students in the various campus areas.

There are three major components of the university, the men's campus, the health sciences centre and the women's campus. The men's campus will consist of a series of integrated buildings for faculties, classrooms, lecture theatres and special facilities with a present total gross floor space of about 300,000 square metres. This, however, is likely to expand considerably. The buildings will lie in a pedestrian precinct within an inner ring road and an outer side of a main spine.

The men's campus will eventually accommodate about 12,300 students in the faculties of science and engineering, arts, economics and business administration, human kinetics, the Institute of Applied Geology and the School of Environmental Design.

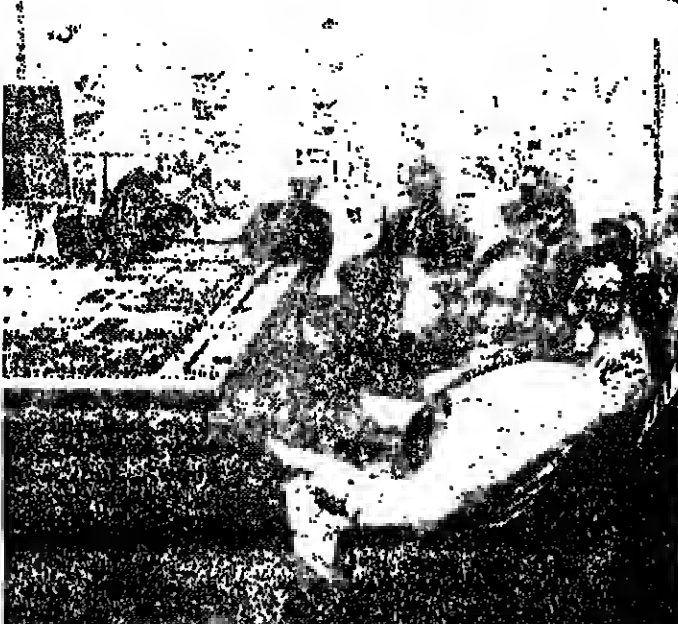
The spine will consist of a series of related spaces of varying size and scale interspersed by the major buildings for general university use—the library, for over 750,000 volumes, in stage one, the student centre with dining facilities, and the gymnasium. The spine will form a pedestrian route, partly open, partly covered, and will connect to the entrance area in the west and in the open space system in the health community east of the men's campus.

The entrance area, an University Place, will be the "front window" of the university to the city and the world, and will connect the health services centre with the men's campus. It will contain the main mosque at the foot of the spine, the university administration building, the auditorium and planetarium. Also an University Place will be the nucleus and art gallery and aquarium.

The extreme importance of the design of the entrance area in conveying the image of the university is recognized by all. A team of outstanding architects has been assembled to carry out the work under the leadership of Professor Pierre Balthusier of Portland, Oregon, and the Project Planning, Coordination Team.

The health sciences centre is located along the spine immediately west of the University Place. It will contain the faculties of medicine, dentistry, nursing, pharmacy and allied health. At the western end of the spine there will be a teaching hospital with 800 beds and provision made for a second hospital. A particular design constraint faced by the planners and designers of the health sciences centre is the separation of men and women. A total student enrolment of 3,700 is being provided for and there will be special housing for key hospital staff.

The women's campus will lie south of the health sciences centre in the south-west corner of the University City. There will be separate housing for female students south of the campus. Education



University leaders listen to a presentation of the Master Plan

tion programming for the women's campus, with a maximum enrolment of up to 3,000 students, is about to start. The Master Plan for the women's campus has yet to be prepared. There is a temporary women's campus with a large new addition to come with a rapidly increasing enrolment.

On the eastern side of the university, ranging from north to south, will be a large sports stadium (the first stage is to be designed for 15,000 spectators) and playing fields. A number of sports centre buildings such as the media centre, the 6 million gallon water storage reservoirs and pumping station and the central utilities plant will be located between the playing fields and the southern boundary. These areas are to be specially landscaped.

The site of the temporary campus facilities in use at the moment will eventually contain special research laboratories, new facilities and additional student housing.

The entrance area, an University Place, will be the "front window" of the university to the city and the world, and will connect the health services centre with the men's campus. It will contain the main mosque at the foot of the spine, the university administration building, the auditorium and planetarium. Also an University Place will be the nucleus and art gallery and aquarium.

The extreme importance of the design of the entrance area in conveying the image of the university is recognized by all. A team of outstanding architects has been assembled to carry out the work under the leadership of Professor Pierre Balthusier of Portland, Oregon, and the Project Planning, Coordination Team.

The health sciences centre is located along the spine immediately west of the University Place. It will contain the faculties of medicine, dentistry, nursing, pharmacy and allied health. At the western end of the spine there will be a teaching hospital with 800 beds and provision made for a second hospital. A particular design constraint faced by the planners and designers of the health sciences centre is the separation of men and women. A total student enrolment of 3,700 is being provided for and there will be special housing for key hospital staff.

The women's campus will lie south of the health sciences centre in the south-west corner of the University City. There will be separate housing for female students south of the campus. Education

tion programming for the women's campus, with a maximum enrolment of up to 3,000 students, is about to start. The Master Plan for the women's campus has yet to be prepared. There is a temporary women's campus with a large new addition to come with a rapidly increasing enrolment.

On the eastern side of the university, ranging from north to south, will be a large sports stadium (the first stage is to be designed for 15,000 spectators) and playing fields. A number of sports centre buildings such as the media centre, the 6 million gallon water storage reservoirs and pumping station and the central utilities plant will be located between the playing fields and the southern boundary. These areas are to be specially landscaped.

The site of the temporary campus facilities in use at the moment will eventually contain special research laboratories, new facilities and additional student housing.

Medical emphasis on prevention

The first batch of graduates from the faculty of medicine and allied sciences at King Abdul Aziz University will be ready to carry work in the hospitals and clinics of Saudi Arabia in three years. They will have received six years' training in not just the most advanced techniques of medicine, but also the health problems and needs unique to Saudi Arabia.

The underlying emphasis in all the medical training programmes of the faculty is an indigenous requirement. Influenza, amoebiasis, malaria, tuberculosis and measles are all prevalent in the Kingdom. Accidental trauma is one of the major causes of death. Injury and incidence of trauma are growing at an alarming rate. The faculty's courses therefore pay particular attention to the study of these diseases.

Another health problem concerns the Hajj. The nearly two million pilgrims who come every year to Mecca and Medina create multi-dimensional health hazards. As such, the Hajj has had a major impact on the faculty's medical and health services programmes.

In the development of the faculty, blind duplication of foreign models has been avoided. However, this is not to say that the experience and knowledge gained from foreign models has not been used. Over 30 different universities and medical centres throughout the world were consulted about their medical syllabuses in the initial stages of the faculty's planning. An advisory board of representatives from such medical colleges as Riyadh, Malaysia, Shiraz, Turley, Leeds University, Manchester University and Johns Hopkins University has guided the design of the curriculum.

"This curriculum," says Dr Abdullah Bashtani, dean of the faculty, "entails a great emphasis on community and preventative medicine, but it also includes an integrated approach to medical subjects which will enable our students to continue their studies in medical colleges abroad."

The faculty's Department of Community and Preventative Medicine gives courses on such diverse subjects as sociology, immunization, patient teaching, health screening programmes, nutrition, low-mortality and epidemic diseases. Students are given full opportunity to study first-hand the problems of people in the community as early in their careers as possible.

Like the university itself, the faculty has developed very rapidly. The dean was appointed only in January 1975. By September a curriculum had been developed and staff recruited. The first batch of students—60 males, 40 females—was accepted at the beginning of

the academic year 1975-76. An additional 40 male students were admitted to the second year of the course; some of these were transferred, by arrangement, from the University of Riyadh, while others were called back from the University of Cairo.

Earlier this year the College for Higher Nursing was established. The curriculum for the college was designed by Dr Samira Islam, who heads the women's section of the



academic year 1975-76. An additional 40 male students were admitted to the second year of the course; some of these were transferred, by arrangement, from the University of Riyadh, while others were called back from the University of Cairo.

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faculty. The college will begin to take students from this academic year.

The faculty has now moved into a new purpose-built building, equipped with some of the most modern medical laboratories in Saudi Arabia. A 340-bed university hospital is almost ready. A permanent medical centre will be completed within a year. The next seven years will see the extension of the medical centre to include schools of dentistry and pharmacy.

Rapid though these developments are, they still fall far short of meeting the increasing medical needs of the country.

The Second Development Plan calls for 4,000 doctors. There are now about 400 Saudi medical doctors in the country. At present, only 9 per cent of all health personnel within the Ministry of Health are Saudis. The vacancy rate is more than 28 per cent for health positions. It is estimated that there will be 14,000 such positions during the current Five Year Plan. The importance of non-Saudi doctors will therefore continue for some time.

The greatest current health requirement of Saudi Arabia appears to be the gathering and collating of information about the health of the people. Public health management without the knowledge of the real needs of the community is wasteful and, indeed, sometimes dangerous. One of the most challenging immediate tasks is to convert a system of oral communication of family relationships to a system of documented records of births, deaths and disabilities. The establishment of a regular demographic census is a prerequisite for this task.

The major emphasis of medical and health training in the coming decades will be on preventative health rather than curative health. Environmental health, nutrition, hygiene and safety programmes will emerge as the key areas of future concern. The faculty of medicine and allied sciences is preparing to meet this challenge.

Journal of Arid Environments

This important new journal will provide a forum for original scientific and technical research work and reviews, concerned with the problems of desert environments. It will contain book reviews, technical notes and short communications, so maintaining a broad view. Such a multidisciplinary and interdisciplinary approach will be of immense value to administrators and governmental officials working in arid lands throughout the world. It will also be essential reading and a means of communication for research workers in biology, ecology, agricultural science and husbandry, concerned with research on arid environments.

The major problems facing the inhabitants of the world's deserts are socio-economic rather than scientific. Thus the journal will include articles on sociological and anthropological aspects. Often, the problems result from increasing population, overgrazing by domestic animals, drought and soil erosion. Although science may suggest strategies for development, administrators often have little access to the knowledge available. By presenting both accepted and controversial ideas, this journal will provide administrators with guidance and firmly established scientific facts, on which to base their decisions.

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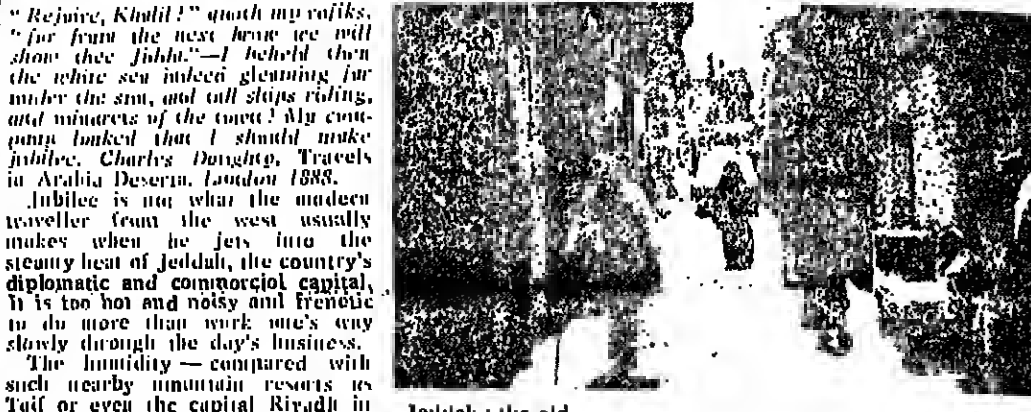
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Top of the pyramid comes first

Tudor David on why Saudi Arabia is putting higher education before the compulsory sector has been developed

the schools, 8,000 came from Egypt, a further 6,000 are Libanians and there are some 2,500 Palestinians.
All this, together with spending on higher education, is taking some 12.6 per cent of Government expenditure and it is intended to increase this to 27 per cent of Government expenditure by 1981.
The more money the Saudis can spend on education, the better - provided, of course, they get good value for it.

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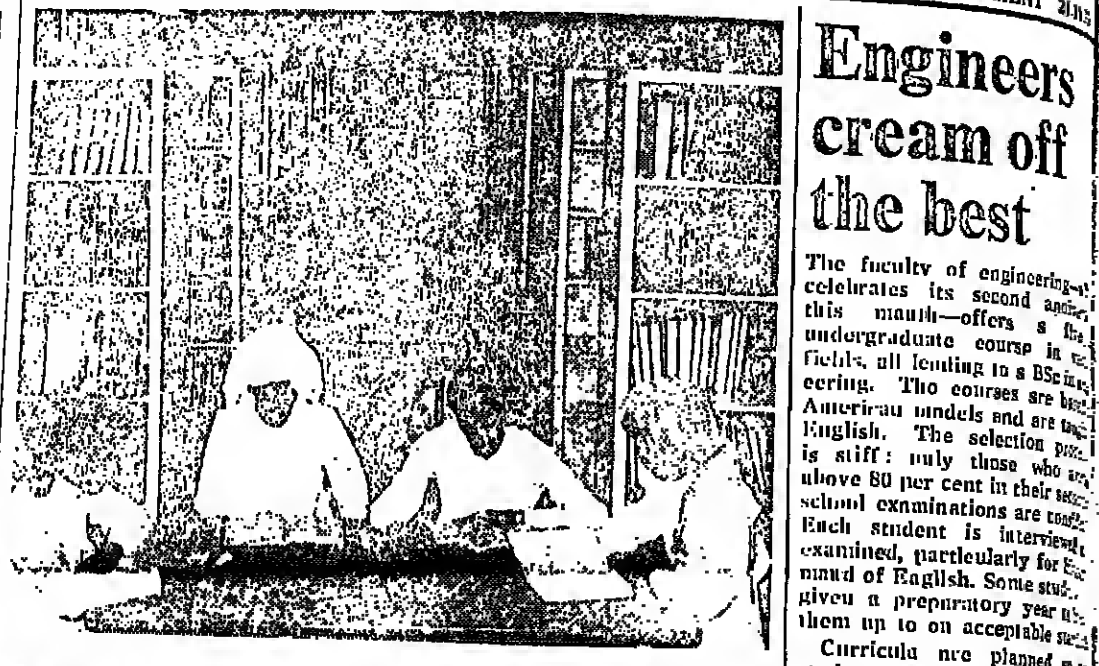
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Books: something that money can't buy

Dr Mumtaz Anwar, chief librarian at King Abdul Aziz University, has a problem which, on the face of it, his counterparts in Britain would be only too pleased to share...

His problems are real, however. Since coming to the university earlier this year from the University of the Punjab Library in Lahore in Pakistan, he has come to realise that, although money helps, there are many things it cannot buy.

Dr Anwar remains confident that everything will be "all right on the night". He says that the gigantic administrative problems besetting every corner of the university arise not from inadequate investments but from the scale and speed of the developments which are taking place.

Another difficulty is a shortage of skilled staff, particularly in the library's acquisition sections. These have only been 20,000 purchases this year, far fewer than the university would have liked.

Binding problems are another headache for the library. Seventy per cent of its periodicals are having to be stored unbound. At present the library takes 2,100 titles a year and would like to double this, but the lack of binders is holding back development.

One thing the library is not having to worry about from this month is shortage of room. It has moved out of its previous cramped quarters into a two-storey building with a floor space of 8,200 square metres.

Like many of the other new buildings going up on the campus, the library is being built with a 10-year life in view. The planned expansion is half a million volumes, equivalent to some 120,000 books and serials titles.

A feature of the building is a tier of 82 mezzanine "pods" on the second floor where students doing long-term projects can leave their books and papers. Each pod is a completely self-contained unit.

With fundamentals for teaching draconian under Islamic law, the construction of a brand new, modern spectacular Koranic dome is expected rather than an official borrowing from university libraries in other countries have to cope with.

But much will be done to meet the demand for books other than those to be got in the country that the new library is taking no chances!

Engineers cream off the best

The faculty of engineering celebrates its second anniversary this month-offers a first undergraduate course in the fields, all leading to a BSc in engineering. The courses are based on American models and are taught in English.

Curricula are planned so that students can freely change options during the first two years. The graduates do almost the same work as those in the professional schools. Thorough training is provided in the basic sciences of physics, chemistry and mathematics, together with all branches of engineering.

All students must take courses in Islamic studies, Arabic literature and humanities. If necessary, they have to attend the British Council Communication Skills in English programme.

The faculty's engineering programmes are taught as "free electives". By contrast, these components are made compulsory for students who are not taking the programme.

The research interests of the faculty reflect the particular needs of Saudi Arabia. Over a dozen research centres and institutes are about to be created, specialising in such areas as energy, engineering, and environmental studies.

In addition to these centres, the faculty hopes to fully operationalise the School of Architecture, which was established on independent lines. The school was being developed into the faculty of engineering. The school offers three degree programmes: architecture, landscape architecture and urban planning. The first batch of graduates has just finished the preparatory year.

President Ken Olsen, one of the three men, said discussing the background of the company: "We believe that we will do that computers should be understandable, approachable and represent good quality which is our primary goal."

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All things to all men

The work of an information scientist in a rapidly developing country is many-sided. In this complex brew the need for correct, accurate and rapid information is acute. But, keeping the cultural imperatives of the university in view, what kind of information would best serve its needs?

Consider the "latest" information relating to architecture and urban planning: it came from the University of Stanford or Harvard (as it happens) or from the Architectural Research Centre or the School of Environment Design in Hull. These institutions take dramatically opposed views on urban planning; and, of course, both claim to give the "latest" information. Similarly with technological information. We all know about MIT, but where on earth is the Intermediate Technology Group?

The information scientist with a background in the scholarship of science has no difficulty in differentiating between "hard" and "enlightened" information. The "hard" describes only the technology without any consideration of its social and environmental consequences. The "enlightened" is information which is culturally and environmentally suitable. At King Abdul Aziz University there is an acute need to develop channels of enlightened information getting to the client first. Perhaps because it is backed by super-salesmen eager to sell off-the-shelf, out-of-place and quite often obsolete hardware. Enlightened information has no such proponents. And it becomes the responsibility of the information scientist to balance the score. This is not easy when there is no real awareness among potential users of what information science has to offer.

During my 18 months in the university, I have been thought of as a "journalist", "super librarian", "methodologist", "propagandist" and even "intelligence man". In

Digital equipment participates in Middle East education growth

Computers, main frame, minis and the latest digital microcomputers have had tremendous influence on the development of Western technology and methods in a wide variety of areas ranging from weather forecasting, population forecasting and in particular, education. The influence has already spread to the Middle East and is being felt increasingly in current technical developments there.

Computers like Digital Equipment Corporation of Massachusetts have been one of the participants in these developments. Since the day when they started off with three men in a 5,000 sq ft accommodation building, they have now grown to a staff of 10,000 and their worldwide turnover topped one billion dollars and their computers are sold everywhere in the world.

Most of the countries mentioned operate either PDP-8 or PDP-11 microcomputers, but the price of these computers has fallen so far that the purchase of a PDP-11/70 in the King Abdul Aziz University in Jeddah, Saudi Arabia, at a cost of 200,000 dollars, is being considered. The Saudi Arabia Government has been the first to purchase a PDP-11/70 in the Middle East. The purchase was made by the Ministry of Planning and Economic Research, Surveying and Mapping, which has been using a PDP-11/70 for a long time. The purchase was made by the Ministry of Planning and Economic Research, Surveying and Mapping, which has been using a PDP-11/70 for a long time. The purchase was made by the Ministry of Planning and Economic Research, Surveying and Mapping, which has been using a PDP-11/70 for a long time.

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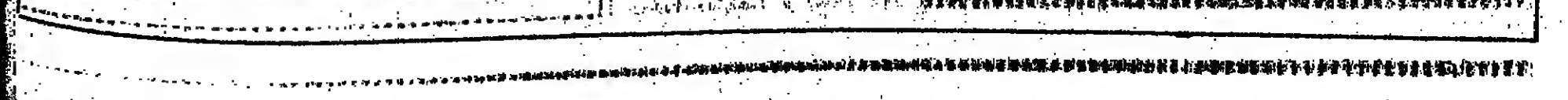
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KAAU: from private college to university city

King Abdul Aziz University came into being in 1967 following pressure by a group of leading families in the western province headed by Sheikh Ahmad Salah Jamjoom, a Jeddah businessman who is still intimately connected with its running.

Started with the approval of the late King Faisal and with a gift of land from the Jeddah municipality, the university was founded privately in its early days. The central government took over responsibility for the burgeoning institution in 1971.

It began with a faculty of sciences and administrative and an enrolment of 60 to 30 women students. There were eight full-time and four part-time academic staff. A faculty of arts opened the following year and 29 students were sent abroad for postgraduate training to provide the nucleus of the Saudi teaching staff of the future. This practice still continues. The university occupied 5,000 square metres of the 750,000 square metres then available. The library numbered 15,000 books.



Sheikh Ahmad Salah Jamjoom, founder of the university

Not only are they then able to "keep an eye" on foreign staff with many academics from the west or from countries with a liberal interpretation of Islam, they are in a position to make sure that the Islamic emphasis of the learning is maintained.

This is particularly important as the university is preparing to open its doors to a large number of students from the West. The traditional learning based on Koranic principles in favour of a case system and much more religiously independent library work of audio-visual aids.

In another five years it is hoped that the majority of the academics will be Saudi, but it is recognised that this may be mainly Arab, and Dr Naseeff cannot see the Saudiisation even in the longer term.

Such dissent is also felt among the university's academic planners about whether courses should eventually all be given in Arabic. Many people doubt the possibility of this, especially in such fields as medicine. They point to the fact that much technical work in the universities in Riyadh is carried out in English.

On the other hand it is argued that countries such as Syria manage to teach everything in Arabic. Most philosophically, the unbridled and precipitated a degeneration into sectarian and doctrinal tendencies. In Saudi Arabia, the Old Left, Marxism and the belief in the resurrection of the children of Adam.

Dr Naseeff is a proponent of the Saudi society the sexes are kept strictly apart. No male students are allowed into the girls' colleges on the Jeddah campus.

Here since 2,000 girls study in 11 departments ranging from Arabic and Islamic studies to public and business administration, psychology, biology, natural sciences and medicine. The teacher training college is in Mecca. The vast majority of the female graduates will either teach or become doctors or nurses.

The college is almost entirely residential and the atmosphere of learning is strong. Girls habitually fill many of the top places in final examinations. Tuition, books and accommodation are all free. Lectures are given by female academics where possible; otherwise the girls follow lectures by notes on closed circuit television screens.

Well before the year an 2000 Mecca will have become an autonomous university; so, probably, will the Medina offshoot. The Jeddah campus will have grown into a University City containing over 40,000 people. A student manual for getting around the campus will be among its futuristic amenities.

In the shorter term, rapid expansion of the site is laid down in the country's Second Development Plan.

Like his senior colleagues, Dr Naseeff is careful to emphasise the care with which academic staff are selected. He recognises the problem of the "campus atmosphere" and says that the principal safeguard against obscuria is that Saudis

An Infallible Disorder? The Crisis and Decline of the New Left
by Nigel Young
Routledge & Kegan Paul, £9.95
ISBN 0 7100 8467 6

This is a good moment to reappraise the New Left—to disinter the remains, embark on a pathological investigation, and finally determine whether the Terrorist Internationalism of the 1970s is the child, perhaps legitimate, perhaps bastard, of the New Left. If the inquest becomes a trial, the defence will be wise to object to Young's recently kidnapped, hijacked, bombed or struck by passing bullets; as with the anarchist movement of the 1890s, the New Left has been carried beyond the borders of political tolerance and discrimination (never a force to be counted on, mind you) by the assassins.

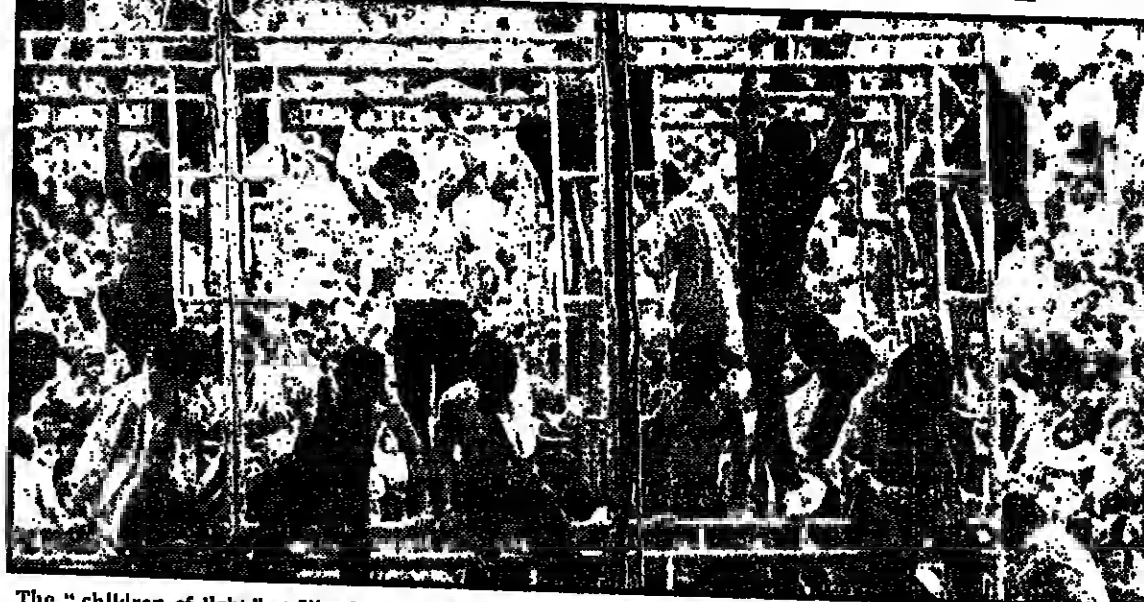
Mr Young is a pacifist; he would have no part in the nihilistic core of the New Left, disastrously deformed in the late sixties, was powerless (not that he himself strove to vulgar an encapsulation of the counter-culture, the alternative society). His thesis is certainly a persuasive one, supported as it is by a wealth—one might say a surfeit—of historical detail. The future at which he begins his downward is terminological: having embarked on a gigantic study of the New Left, Young has fallen into the trap of defining it, walking it, placing it in stark contrast to the Old Left. But the Old Left was more than a suggestive concept, a slogan, a blow-up of the camera angle favoured by young idealists who refused to admit that history is an end.

According to Young, the NL passed through a succession of stages or postures, although each retained the other. In its beginning there was moral commitment, individual concern and personal witness—manifested in the peace and civil rights movements. The second phase, roughly from 1963 to 1967, was characterised by participatory democracy, projects and essentially communal activity. The third phase was that of the anti-war campaign, marked by the rise of anti-Americanism, and the revival of Marxist concepts. The final stage was intensely violent: black power, urban guerrilla warfare, bombings, arson. In Young's view, the authentic NL identity and outlook had crystallised by 1966 but failed to survive the crucial watershed of 1968, which precipitated a degeneration into sectarian and doctrinal tendencies. In Saudi Arabia, the Old Left, Marxism and the belief in the resurrection of the children of Adam.

Young's determination to blame the "Old Left" for every outbreak of violence and authoritarianism is a self-defeating Manichean or tribalistic exercise for a historian. A glance at the history of the Narodnik movement in nineteenth-century Russia, or the peasant, persuasive impulses of the Go-the-People militants who were drowned in bitterness and superseded by the bomb-and-

BOOKS

Innocence as a revolutionary weapon



The "children of light" at Woodstock, 1970. Was "flowerpower" the authentic core of the New Left?

bullet ruthlessness of Nietzsche and the People's Will. Within the broad framework of nineteenth-century anarchism, the New Left was a constant oscillation between propaganda-by-word (Proudhon, Kropotkin) and propaganda-by-deed (Bakunin, etc.). Therefore, if we wish to pursue further the core concepts of the New and Old Lefts, we must begin by juxtaposing the dichotomy of violence and non-violence. After all, if Trotsky and Mr Roy Jenkins both belong to the Old Left, whatever links them it cannot be agreement about political violence.

As I have said, the pursuit of the NL's holy grail may be a futile one. Young himself almost admits as much when he writes: "In searching for the source of the NL's loss of identity, it is important to recognize its relative incoherence and amorphous quality from the outset." Nevertheless, one must try: and there are a number of obvious characteristics that spring to mind. A particular notion, or cluster of related notions, of "alienation", principally a humanistic or sentimental perspective which refused to accept the reductionist (and distorter) of Marx's loss of thought) prevalent in the Communist-Manifesto era. Partly under the influence of Marcuse, the NL took issue with the problem of the divide seriously against liberation could not be achieved by grand sweeps of the collective brush alone. Equally characteristic of the NL was a Rousseauesque belief in primal human innocence, in a return to the unspoiled state of harmony, and a consequent hostility towards technology, material "progress", expertise, elites and hierarchies of authority, whether capitalist or "socialist". The New Left, much more than the old, was ready to embrace modernism and avant-gardism in the arts, and to examine the impact of technology on culture and the media.

Even so, the NL refused to encapsulate itself. Indeed almost all its seers and prophets were expropriated from cultures already formed: Marcuse, Camus, Sartre, Walter Benjamin, Arendt, D. Wright.

Mr Young is a pacifist; he would have no part in the nihilistic core of the New Left, disastrously deformed in the late sixties, was powerless (not that he himself strove to vulgar an encapsulation of the counter-culture, the alternative society). His thesis is certainly a persuasive one, supported as it is by a wealth—one might say a surfeit—of historical detail. The future at which he begins his downward is terminological: having embarked on a gigantic study of the New Left, Young has fallen into the trap of defining it, walking it, placing it in stark contrast to the Old Left. But the Old Left was more than a suggestive concept, a slogan, a blow-up of the camera angle favoured by young idealists who refused to admit that history is an end.

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regarded by Young as subjective poisons which contributed to the violent romanticism and the hero cults that dominated the NL after 1968. The strategies favoured by Young are those which strip shirt of violence: denims, fraternization with troops and police, strikes and go-slows, non-cooperation and tax refusal, war resistance and destruction, occupations and boycotts, even sabotage. In other words, human optimism, tenderness, awareness of the opposition's humanity, the great libertarian ethic.

I find myself almost completely persuaded by Young. He is right, wise. All those on the Left—the tribal victors, by muscle and short-term efficiency, all those who deride the libertarians and pacifists as impractical yogis, are merely animals glistening round and round Orwell's form, believing themselves to be travelling in a straight line. (OK, Man, so Uncle Sam's all this shit, this nippin, on your head, he decimates your family with frangible copper bombs, so what are you like a Buddhist, or maybe set yourself on fire in protest? It's a problem, certainly; the problem, Young's devastatingly accurate account of what happened to the NL during the late years of the Vietnam war, the crude ho-wahp the whitewash of National Liberation Front, excess violence, the naive romanticization of NFL super-villains reminds us that the vision of liberation extorted by the tribal, eye-for-eye, left is pathetically short-sighted, blinkered. As Giap advanced, deploying artillery and tanks in conventional formations, the Vietcong, liberating systematic, razing villages under a cease of corpses, a Vietnam peasant might well have asked: What does Picasso's *Guernica* really mean?

Finally, this is an important book not technically a good one. The material is chaotically organized, the same material constantly reappears in different contexts, blurring Young's conceptual division and provoking disquiet, then work to prute the trees, the wood is obscured, on indigestible number of initials choke the pages. Thus: To other splinters which formally emerged in 1962, in addition to PL and the WSA, were the three fragments of the 1968 SDS National Office Group—the "RYM 1", part of it becoming "Weathermen", and the "YSA and the YSA and the YSA who had been wearing the wings...". Perhaps fearing ill-effects of overlooking the wider context, Young has spread his canvas too broad: CNN, the Black Panthers and the Irish Civil Rights Movement, Czech passive resistors and the odious of *New Left Review*, all swell the narrative to unmanageable proportions.

Not can the author's decision to ignore the European Left—the events of May 1968 in Paris be justified. The NL was an international phenomenon, yet Young's book, so far as I could ascertain, contains not a single reference to any work not written or published in English.

David Canto

Differences in perceptions

conditions and power supplemented by background material on the facts about inequality and other structural features of Britain and Sweden. This is a rather familiar and narrow focus for a sociological study, but comparative material of this kind is rare and the interest of the study is in the way that the two countries are surprisingly similar in their patterns of frequent mobility within them, though the Swedish labour movement has probably worked harder than the British to humanize working conditions. There are, however, striking differences in the way that these similar social structures are perceived by their respective working classes. The Swedes are far more aware of inequality; and have a clearer perception of the power structure of their society, than do British workers. On the other hand they believe there is more upward mobility, and while far from optimistic about their own chances of advance, they see their society as more open, especially to those able to secure education. (The British, in contrast, regarded such wealth and inheritance as the main source of advancement.)

There were also considerable differences in workers' perception of the role of the labour movement; the Swedes identifying the unions and the Social Democratic Party as their main "indicators of improvement in their lives while the British workers hardly acknowledged their existence. In accounting for this the author rather neglects the obvious fact of the sheer longevity of Social Democratic government in Sweden but he does draw attention to other major factors: the fact that party and union rhetoric in Sweden is much more geared to themes of class and inequality and related to this, the much more intensive adult education work of the Swedish movement. As he rightly says, it is doubtful whether one can really speak of a British labour "movement".

In his discussion of differences between the two countries' labour organizations Scase pays attention to but never really tries to resolve the significance of the much higher degree of centralization in the Swedish unions. Among the union movements of the world the British stands out as decentralized, relatively democratic and unorganized.

by bureaucracy, with a large degree of shop-floor power wielded directly by unskilled and long-established working classes. But these same characteristics also mean parochialism and disinterest in wider politics. Expressed in this way the differences between the British movement and a centralized but powerful one such as the Swedish raise intriguing problems for the assessment of relative "success" in the achievement of workers' goals. In this work Scase has drawn attention to some of the relevant differences—largely in terms of perceptions of the socio-political structure—but many others in the domain of patterns of action and outcomes remain to be explored.

Colin Crouch

A very personal literary history

History of Scottish Literature by Maurice Lindsay

The writing of literary history is difficult and demanding. Not only that: it is open to attack as a dubious form of intellectual endeavour.

There is no simple answer to these questions. But speaking as one who has himself tried to write literary history, I must say that I think literary history is both defensible and desirable.

This certainly is what I would look for in a modern history of Scottish literature. Such a history had in 1958 the friendly German scholar Kurt Wittig providing in his book 'The Scottish Literary Tradition' a survey and benedictory discussion of Scottish literature in which everything was admirably seen as reflecting a pre-ordained Scottish character.

How does he see his task? Like most critics and historians in these islands, Scottish and English alike, he is not especially strong on questions of methodology.

In fact, Lindsay's history has no very distinct pattern or order, and in a sense this is part of its appeal. It is a very personal book, and it is the engaging personal style of his historical narrative that prevents the book becoming at any point pompous or flat.

His own critical views are on the whole somewhat conventional. He attacks Augustan poetry as "stilted" and resulting from an absence of confidence in the native language of the day.

Comic, compassionate, unique

The Writings of Brendan Behan by Colbert Kearney

Brendan Behan was a poet, playwright, novelist, journalist, political revolutionary, talker, clown, pugilist, drinker and, in the words of Philip O'Brien, "a sort of prophet of the biggest heart that has beaten in Ireland" for many a long year.

deol of the book deals with Behan's life both in and out of various prisons, for various offences, and it makes very funny and very sad reading.

More importantly, Kearney links Behan's life with his writing in a convincing way. What was a drinker and, in the words of Philip O'Brien, "a sort of prophet of the biggest heart that has beaten in Ireland" for many a long year, his output, in comparison with most modern writers, is slight, and much of it, especially towards the end of his life, is rather floppy.

These are questions of judgment, and literary historians must be allowed his right. But he has not said to say that there is too much geographical detail, especially about minor figures, and the space it occupies would have been better spent on further critical discussion of the works.

Lindsay finds the biographies of authors interesting for their own sake—and of course they often are. He provides us with much interesting information, sometimes amusing incident, and where he does so his range of reading and appetite for fact sometimes pay off in a rather unexpected way.

Surprisingly, Lindsay is better on the medieval makers and aspects of poetry and music in the sixteenth century than he is on the modern researches into things their conclusions impudently put in his mouth, than on some aspects of the eighteenth century, which he knows so well and on which he has written so effectively. When he writes of the top of his head, and his own confidence betrays him into some odd errors.

Episodic

William Blake: A New Kind of Man by Michael Davis

Michael Davis's William Blake, New Kind of Man is described in the dust-jacket as "the complete biography that has long been needed".

His synopses of the poet's books, competently managed themselves, are only partly relevant to the facts of Blake's life, and it seems a little surprising that the last known manuscript poem—'The Lamb'—is not mentioned.

The personal tone re-emerges in the treatment of nineteenth-century literature. Here it is often the unexpected judgments, supported by quotation, that impress most.

There is real evidence, however, of another kind of relationship between life and works: that which shows the horror of the life and the horror of the work. It is a book which is as much a contribution to knowledge as to understanding.

Map analysis

Quantitative Methods in Geography: An Introduction to Spatial Analysis by Peter J. Taylor

Geography students require an introduction to quantitative methods for two reasons: to allow them to group and evaluate the procedures which they must read; and to form the basis for their own research efforts.

Lacking such a numerate vocabulary, representatives of separate disciplines have taken to providing their own texts which both provide mathematical and statistical foundations and outline the uses of relevant procedures.

The Chemistry of Mercury edited by C. A. McAuliffe

When chemists come to write books as opposed to collecting factual data in research or review papers, they meet the problem of relating interest throughout long passages of concerned but just collected material.

Mercurial facts and folklore

Maps and Statistics by Peter Lewis

The contents of this book are not what most geographers will expect from the simple title Maps and Statistics. This book represents a distinctive and original presentation of basic inferential statistics for a geographical audience.

As a potential text, Quantitative Methods in Geography provides a generally lucid but somewhat eclectic coverage. Written for the American market, its hardback price in Britain is high, and teachers will have to evaluate its merits for a while introductory course.

coordination chemistry of mercury (mainly just solid compounds) and A. J. Blundworth on the organic chemistry of mercury.

A link with this title could have been written by dividing the chemistry of mercury into the interest that centres on mercury as an element, an solid compounds, and on aqueous solution chemistry and on organic chemistry.

Celestial

Taking measurements

Maps and Statistics by Peter Lewis

It is difficult to present Lewis's rationale for this organization in just a few words except to note that the arrangement is logical and consistent within the definitions and concepts of the book.

This is certainly a technically sound and thought-provoking book. Assessment is difficult, however. According to the dust jacket the book is "a deliberately elementary introductory text".

Textbook on Spherical Astronomy, sixth edition by W. M. Smart, revised by R. M. Green

The approach of this standard text on spherical astronomy is straightforward and only a knowledge of trigonometry and simple calculus is assumed.

In three dimensions

Place space

Location in Space: A Theoretical Approach to Economic Geography, second edition by Peter E. Lloyd and Peter Dickson

To set out a comprehensive theory for the location and spatial arrangement of economic activities is one of the most intractable of tasks. It seems at times to require either geographical-economic, mathematical or a simply economic-geographical faith, but it can be developed by close attention in detail within each of the variables involved.

But even this large and seemingly comprehensive list has its deficiencies of balance and omission. Among the latter are, for example, the lack of any consideration of the effects upon locational behaviour of varying rates of technological change through time.

The book should be readily understandable at university level, although it goes into much greater depth than the average undergraduate is likely to need.

Since the first edition was published in 1931 most astronomers will already be familiar with this book and the only question when it was changed was how to improve it.

Reviewers

Comic, compassionate, unique

David Cotter is 'author of Cube, Yes, The Fellow-Trovelors and The Occupation'.

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BOOKS

Seeking after truth

Wittgenstein and Scientific Knowledge: A Sociological Perspective by Derek L. Phillips Macmillan, £10.00 ISBN 0 333 21314 9

In the past 20 years or so three apparently disparate areas of intellectual inquiry have been drifting towards each other...

Under the impact of Wittgenstein in philosophy, Toulmin, Kuhn, and others in the history of science, and Karl Mannheim in sociology...

A central concern is with whether, and in what sense, we may think of science as giving knowledge...

Under the impact of Kuhn, it is now quite common for social historians of science to argue that there is no ultimate criterion of truth and rationality in science...

which the physical world is viewed. Between these two paradigms there is in a sense nothing in choice, and each excludes the other...

Professor Phillips's object is to examine the Kuhnian perspective on the history of science with the aid of the philosophy of the later Wittgenstein...

Briefly the lesson which Wittgenstein has to teach is that while Kuhn and others are right to emphasize the relativism of claims to knowledge...

There is much in this book to commend. It highlights an important issue in well-expressed and jargon-free language...

quately faced, although they are among the most difficult problems for the philosopher of science...

One such may be expressed like this: is there a hard core of facts and categories which no conceptual scheme can do without?

Another problem is this. If the sociologist, from his Olympian heights, judges that all claims to knowledge are indeed embedded within a theory of science...

Condemned always to be the observer, never the participant, must also risk not even knowing what the game is anyway...

A further problem: if there is no ultimate criterion of rationality, is this not because we cannot even specify what it is we require?

G. A. J. Rogers

Bold eclecticism

Outline of a Theory of Practice by Pierre Bourdieu Translated by Richard Nice Cambridge University Press, £9.00 ISBN 0 521 21178 6 and 29164 X

This book by Pierre Bourdieu, whose translated work in the sociology of education has already begun to earn him a substantial reputation in this country...

The form of the book is of a theoretically and epistemologically sensitive analysis of fieldwork carried out in Kabylie during the Algerian war...

Both habitus and doxa are complex concepts which themselves imply complex theoretical constructions...

Leslie Sklar

Socratic teacher

Marin Heidegger: An Illustrated Study by Walter Biemel Translated by J. L. Mehta Routledge & Kegan Paul, £5.75 ISBN 0 7100 8638 5

Marin Heidegger (1889-1976) may truly be described as one of the seminal thinkers of his age...

Walter Biemel's book first appeared in German in 1973, and has now been admirably translated by J. L. Mehta...

Michael Banton

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UNIVERSITY OF GUYANA Vacancies Faculty of Education

1 LECTURER IN SCIENCE EDUCATION Applicants must have the following qualifications: At least a good first degree with science subject specialization...

2 LECTURER IN EDUCATIONAL PSYCHOLOGY Applicants must possess a higher degree in Educational Psychology and have specialised in Human Development and Learning...

3 LECTURER IN EDUCATIONAL ADMINISTRATION Applicants must possess a higher degree with relevant experience. The successful applicant will be required to undertake teaching and research in science education...

UNIVERSITY OF GUYANA VACANCIES DEPARTMENT OF ELECTRICAL ENGINEERING Applications are invited for the following positions in the Department of Electrical Engineering.

UNIVERSITY OF NATAL DEPARTMENT OF STATISTICS AND BIOMETRY Applications are invited from suitably qualified persons for appointment to the post of SENIOR LECTURER IN STATISTICS

NATIONAL UNIVERSITY OF LESOTHO Applications are invited for the following posts in the Department of Economics.

KENYATTA UNIVERSITY COLLEGE KENYA SENIOR LECTURER: Applications are invited for the following posts in the Faculty of Education.

UNIVERSITY OF EXETER DIRECTOR OF THE SCHOOL OF EDUCATION Applications are invited for the post of Director of the School of Education and Professor in the Faculty of Education from October 1, 1978.

UNIVERSITY OF SINGAPORE FACULTY OF DENTISTRY Applications are invited for teaching appointments in the Department of Operative Dentistry, Prosthetic and Oral Surgery.

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Away from the bloodbath

The Ply of It All: Polarization of Racial and Ethnic Relations by Leo Kuper Duckworth, £12.50 ISBN 0 7156 11143

Leo Kuper, an Emeritus Professor of Sociology in the University of California, Los Angeles, is a South African exile who has been examining the relations between race, class and revolutionary change in other parts of Africa...

Kuper's research has been motivated by both positive and negative impulses. Positively, he explores the social conditions that encourage inter-group harmony, especially in what he calls plural societies...

Negatively, he deplores recent arguments that violence is inevitable as a means of radical change. He believes that violence cannot be achieved by reformism...

For Kuper, the violence of the Western world and that of its colonialism are essentially the same. He believes that the violence of academic circles, engaged in academic exhibitions of revolutionary fervour...

violence of liberation. For some guerrillas, violence is allegedly liberating, purging, and therapeutic. President Macioli of Mozambique asserted that in the hands of the enemy an automatic rifle was an instrument of repression...

To such rhetoric Kuper opposes case histories of Algeria, Zimbabwe, Rwanda, and Burundi, in each of which there were armed struggles which took the form of racial conflict and included genocidal massacres. They are horrible warnings.

The path to independence in Algeria was signposted by a series of massacres leading to the casual slaughter on the streets and the bombings by the French Organisation Armée Secrétaire. In Zimbabwe, there were riots prior to independence, and then in 1964 an African revolution in which several thousands of Arab descent were killed. In Rwanda 10,000 to 12,000 members of the ruling Tutsi ethnic minority were slain in 1953 in the revolution of the previously subordinate Hutu. Some of the Tutsi fled to neighbouring Burundi a country with a comparable ethnic composition.

Kuper remarks sardonically that some who think that political mobility is a matter of proportions would point to the slaughter in Rwanda. Just that in Burundi a similar revolt, the Tutsi struck first, massacring possibly 200,000 Hutu.

story of human freedom? The failure of the UN Commission on Human Rights to acknowledge even the minimal violations of the African Charter on the Organization of African Unity are part of the same sorry picture.

The depressing conclusion is that the conditions for inter-group harmony existed in all four countries to a greater extent than they do in South Africa. In Burundi there were initially many bonds linking members of the two ethnic groups. In the first phase of violence Hutu were slain because they refused to join in attacks on Tutsi. Nor were members of the two groups always easily identified. The Tutsi murder squads were helped by lists of Hutu students drawn up by their Tutsi teachers and fellow-students, while some of those hacked to pieces with machetes were Tutsi mistaken for Hutu.

If hateful processes of polarization can start under such circumstances, then a Gresham's Law of Conflict by which "the harmful and dangerous elements of the society will tend to keep the conflict within bounds" can apply wherever the polarized groups are not opposed by "strong" them. Kuper's key conclusion is that the course of events depends substantially upon the acceptance of responsibility by leaders of opposed groups but he says little about what constitutes responsible use of power. It is always some sort of minority that wields the power and there may be little approval at the time for what the responsible cause, as it is, in the author's generalisation, so much as in the case, studies, which point to, and beyond, his conclusions.

Michael Banton

his thought, and here Biemel brings out Heidegger's unique quality as a teacher in the classic Socratic mould.

Biemel tells us that there is a two-fold leitmotif in Heidegger's thinking: the question of Being and the inquiry into the truth of Being. The latter is to break away from an object-dichotomy following by Descartes. And this is why he insists that in our philosophical work we need to go back to the Greek before this division came in. Heidegger concludes that "The essence of truth is not a correspondence", which is not a philosophical as it sounds, as he claims that truth is bound up with the question of existence or being. In his later work Heidegger concludes that the complex of problems regarding ontology, thinking and language is, in essence, the question of truth. Heidegger's philosophy is, in his later work, a philosophy of language. Heidegger believes that the language of language, especially in poetry, is to be found in being. In this context he is particularly related to the work of Heidegger and Gadamer.

Through this book is richly illustrated with photographs of Heidegger with his wife, and other colleagues, we are told very little about him as a person. This is justified by Biemel's view that Heidegger's work is his life. Heidegger is heard to believe that a national biographical narrative, such as that given in Heidegger's recently published interview in Spiegel, would not, however, add another dimension to our understanding of both the man and his work.

Wolfgang Iser

10/11/77 1:50

Administration



Applications are invited for the following post in the Authority's Advisory Service.

County Subject Adviser Technology and Heavy Crafts

Candidates should be well qualified teachers with good experience in secondary schools. Experience in Further Education would be an advantage.

Application forms and further particulars are available on receipt of a stamped addressed tooleap envelope quoting post reference OD/1.20.77.

Application forms and further particulars may be obtained from the Staffing Officer (reference DP), Derby Lonsdale College of Higher Education, Kedleston Road, Derby, DE3 1GE, to whom completed forms should be returned by Monday, 7th November, 1977.

Fellowships and Studentships

British/Iranian Scientific Exchange Scheme

To stimulate Iran-British collaboration in science and technology, the British Council have launched a new exchange scheme, which began in April, 1977.

BRADFORD THE UNIVERSITY MODERN LANGUAGES DEPARTMENT

RESEARCH STUDENTSHIPS

Applications are invited from suitably qualified candidates for the following research studentships in the Department of Modern Languages.

Colleges of Higher Education

SCOTTISH COLLEGE OF TEXTILES

DEPARTMENT OF DESIGN

LECTURER GRADE A

Applications are invited from suitably qualified graduates in textile design for the post of Lecturer in Fabric Structures. The successful applicant will be required to teach the subject to first and second year students.

West Sussex Institute of Higher Education

Senior Lecturer

in charge of training for the social services

(Senior Lecturer scale, Burnham Further Education Report, F5.031 to F5.955-bar-C8.186-C8.417 plus £320 plus £180)

The Institute is founding, with the collaboration of the West Sussex County Council Social Service Department, a Social Services Training Centre.

Further details and forms of application are obtainable from J. P. Wynn, Director, West Sussex Institute of Higher Education, The Dome, Upper Bognor Road, Bognor Regis, West Sussex. The closing date for applications will be 31st November, 1977.

DERBY LONSDALE COLLEGE OF HIGHER EDUCATION

SENIOR LECTURER GRAPHIC DESIGN

The post demands someone with an interest in the whole area of visual communication in addition to enthusiasm for his or her own specialism.

Application forms and further particulars may be obtained from the Staffing Officer (reference DP), Derby Lonsdale College of Higher Education, Kedleston Road, Derby, DE3 1GE, to whom completed forms should be returned by Monday, 7th November, 1977.

General Vacancies

WANTED

Experienced Researcher

to undertake Gulbenkian/Arts Council-sponsored one-year study of existing relationships between community work and community arts in various parts of the country and to produce a final publishable report.

Closing date for applications 7th November, 1977. For details write to: Deputy Director, Calouste Gulbenkian Foundation, 98 Portland Place, London W1N 4ET.

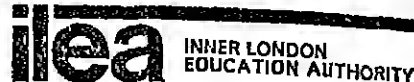
YOUTH OFFICER

YOUTH OFFICER required for London Branch, British Trust Cross Street, Dulwich Institute in Schools. Training for candidate will be provided. Salary negotiable.

Workers' Educational Association North Western District DISTRICT SECRETARY

Applications are invited for the post of Secretary to the N.W. District of the Workers' Educational Association. The job of District Secretary entails the ability to work with voluntary members and professional staff in developing the work of the N.W. District in accordance with the aims and objectives of the Association.

Further information and application forms to be returned by November 17, 1977, from The Acting Secretary, Workers' Educational Association N.W. District, College of Adult Education, Cavendish Street, Manchester M15 6ER.



Inspector of Special Education (District Rank)

Salary range: £8888-£9734 (Inclusive of London Weighting and Phase 2 Supplement with possible progress to £10,640)

Inspector of Special Education required, with specific responsibilities in the field of hearing impairment, together with some general duties in other areas of special education.

Applications are invited from well qualified men and women with specific qualifications and experience in this field of hearing impairment. Previous experience of advisory work would be an advantage.

Details and application forms from the Education Officer (EO/Estab 2A/1), Addington Street Annex, The County Hall, London SE1 7PB. Please enclose a stamped addressed envelope. Forms to be returned by 7 November 1977.

Overseas

PERTH, WESTERN AUSTRALIA

CLAREMONT TEACHERS COLLEGE

(A College of Advanced Education) Applications are invited from suitably qualified persons to fill the following position which will become vacant early in 1978.

SENIOR LECTURER ART EDUCATION

The College is seeking a highly qualified person to assume responsibility in the direction of the Principal for the organisation, administration and development of courses in the Department of Art Education.

Salary To be inquired of in the form of appointment via the Senior Lecturer range \$A19,305 to \$A22,321.

CONDITIONS OF SERVICE

These are comparable with those in universities and a College of Advanced Education in Australia.

APPLICATIONS

Details of conditions of service, relevant qualifications and application forms may be obtained from: Migration Liaison Officer, Writton Australia House, 115 Strand, London WC2R 0AJ

The appointee will be expected to commence duty as early in 1978 as possible. Applications close on November 21, 1977.



DIRECTOR

Applications are invited for the position of Director of the Institute which will become vacant in July, 1978, upon the retirement of Dr. S. I. Evans.

The Institute which, until 1950, was known as the South Australian Institute of Mines and Industries, was founded in 1878 and since 1952 it has an international reputation and a long history in the education of persons for professional and technical careers in industry and public services.

ANNUAL SALARY AUS. \$36,479

Further information may be obtained from the Chief Personnel Officer, South Australian Institute of Technology, North Terrace, Adelaide, South Australia, 5000.

THE LEVERHULME TRUST Research Awards 1978

The Leverhulme Trustees, through their Research Awards Advisory Committee, offer:

(i) FELLOWSHIPS AND GRANTS

To 2014 senior persons pursuing investigations, particularly those which are complementary to routine duties or any other work which is being carried out by the recipient, the Trustees offer research awards. The awards are limited to persons who are in the United Kingdom or the Republic of Ireland. The duration of the award does not exceed one year.

(ii) MERITUS FELLOWSHIPS

A limited number of awards at special intervals are made to persons of the highest calibre, who have distinguished themselves by their research in the field of the Humanities and the Social Sciences. The awards are limited to persons who are in the United Kingdom or the Republic of Ireland. The duration of the award does not exceed one year.

(iii) FACULTY FELLOWSHIPS IN EUROPEAN STUDIES

A limited number of awards to strengthen the teaching of European Studies in the universities and polytechnics of the United Kingdom are made to persons of the highest calibre, who have distinguished themselves by their research in the field of the Humanities and the Social Sciences. The awards are limited to persons who are in the United Kingdom or the Republic of Ireland. The duration of the award does not exceed one year.

(iv) SENIOR STUDENTSHIPS

Up to 20 studentships are made each year for one or two years to persons of the highest calibre, who have distinguished themselves by their research in the field of the Humanities and the Social Sciences. The awards are limited to persons who are in the United Kingdom or the Republic of Ireland. The duration of the award does not exceed one year.

(v) OVERSEAS STUDENTSHIPS

Up to 20 studentships for a period of advanced study are offered to persons of the highest calibre, who have distinguished themselves by their research in the field of the Humanities and the Social Sciences. The awards are limited to persons who are in the United Kingdom or the Republic of Ireland. The duration of the award does not exceed one year.

(vi) EUROPEAN STUDENTSHIPS

Up to 20 studentships of £1,200 for one year for advanced study are offered to persons of the highest calibre, who have distinguished themselves by their research in the field of the Humanities and the Social Sciences. The awards are limited to persons who are in the United Kingdom or the Republic of Ireland. The duration of the award does not exceed one year.

General Vacancies

Lecturers in Communications £2,295-£5,778 (plus supplements)

Applications are invited from both men and women for personalable posts in the Department of Agriculture at Loughry College of Agriculture and Food Technology, Cookstown, Co. Tyrone.

The work involves providing training in Human Communication for people working within the Agriculture and Food Industries, e.g. in Education, Journal and Extension) and marketing. There are four main programme areas in the Department: formal training including a post-graduate course leading to a Diploma awarded by Queen's University of Belfast; induction and in-service training; advice and development and research.

Post 1 Special Interest in Marketing and Management An Honours Degree and/or post-graduate qualification in adult education, community development or related areas is required.

Post 2 Special Interest in Marketing and Management An Honours Degree and/or post-graduate qualification in marketing, management or related areas is required.

Post 3 Special Interest in Psychology and Social Psychology An Honours Degree and/or post-graduate qualification in education or related areas is required.

Post 4 Special Interest in Psychology and Social Psychology An Honours Degree and/or post-graduate qualification in education or related areas is required.

SALARY SCALES: Grade III: £3,321 to £5,778 Grade IV: £2,295 to £3,100 In addition to the above salary scales supplements of between £310.50 and £52.00 per annum will be payable.

Please write or telephone for an application form quoting reference SB 27A/77/ES to Civil Service Commission, Rosebank House, Upper Leinster Road, Belfast BT4 3NR (Telephone Dundonald 4585 ext. 267). Completed forms must be returned to arrive not later than 3rd November, 1977.



Overseas continued

ELT Specialist (Materials Production) (India)

Rajonell Institute of English, Chandigarh Qualifications: MA or postgraduate qualification in TEFL/TESL and experience in the production of reading materials.

Salary: £5,210-£7,054 p.a. plus 10 per cent inducement. Benefits: personal and children's allowances; free furnished accommodation; medical scheme; employer's portion of superannuation; two year contract.

Return latest and paid CV containing a questionnaire by the British Council, please write briefly stating qualifications and length of appropriate experience, quoting reference number 77 PC 463 and title of post, for further details and application form to The British Council (Appointments), 65 Davies Street, London, W1V 6AA.



Overseas continued

LAFAYETTE COLLEGE

Easton, Pennsylvania, U.S.A. It is seeking a candidate for appointment to a vacant post in the rank of Professor.

Candidates must be qualified in the area of Computational Politics with evidence of interest and specialization in 3-D in film and/or Computer-aided Teaching. Teaching experience in Political Theory would be welcomed. For previous consideration, candidates must possess a record of instruction of at least 10 years of teaching coupled with clear evidence of scholarly capacity and productivity.

Colleges of Further Education

TEACHERS OF EFL IN BRIGHTON

required immediately for short intensive courses for business and professional people. Applications are invited for permanent positions from teachers with a minimum of 2 years' relevant experience. Qualifications in TEFL and business background or interest would be an advantage.

Please apply with CV to Director of Studies, Regent School Executive English Courses, 52 Dyke Road, Brighton BN1 3JH. Tel: Brighton 21771.

Colleges and Institutes of Higher Education

LANCASHIRE COLLEGE OF HIGHER EDUCATION

COLLEGE COUNSELLING SERVICE

Applications are invited for the post of COLLEGE COUNSELLING SERVICE. The successful candidate will be required to provide a counselling service to students of the college.

Further details and application forms may be obtained from the Director of Staffing, Lanchashire College, Lancaster, LA1 3SD.

Classified Advertisements

To advertise in THE TIMES phone John Ludbrook 01-837 1234

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